

V I E W
OF THE
R U S S I A N E M P I R E
DURING THE REIGN OF
CATHARINE THE SECOND,
AND TO THE
CLOSE OF THE PRESENT CENTURY.

By WILLIAM TOOKE, F. R. S.
MEMBER OF THE IMPERIAL ACADEMY OF SCIENCES AND OF THE
RUSSIAN ECONOMIC SOCIETY AT ST. PETERSBURG.

IN THREE VOLUMES

VOL. I.

L O N D O N

PRINTED FOR T. N. LONGMAN AND Q. REES, PATERNOSTER-ROW; AND J. DEBRETTS, PICCADILLY.

1799.

ADVERTISEMENT.

THE Russian Empire, which in various respects now fixes the attention of Europe, has for several years been the subject of a multitude of investigations and writings, by which the knowledge of that country is considerably improved and enlarged. The care which Catharine the second, from her first accession to the throne, and during the whole of her reign, devoted to the cultivation of this knowledge, has been attended with so much success, that Russia, which, prior to the year 1762, was a sort of terra incognita in our part of the globe, is now in possession of a very considerable store of materials, from which the present state of this remarkable country may be illustrated and described. The first and most important step to the elucidation of the natural and moral condition of Russia was the appointment of the academicians of St. Petersburg to travel for the purpose of exploring its qualities in both these respects; and their journals still form the basis of all that we know with certainty of the internal state of

this extensive empire. These important discoveries assisted the zeal of some industrious foreigners, who either in the country itself, or by correspondence and connections, collected useful materials, and communicated the result of their labours to the public. By the introduction of the governments, which, besides the beneficial effects they produced on the political administration of the empire, greatly assisted the knowledge of the country; by the admeasurement and survey of the districts assigned them, which facilitated the construction of special charts on a more accurate plan; by the more adequate enumeration of the people, &c. but, above all, by the wise and enlightened publicity with which it was allowed to treat of these matters, this knowledge acquired such a powerful accession, that the idea of a systematical digest of all the necessary materials was no longer to be considered as a vain speculation. Busching, at first, and after him Messrs. Schlœtzer, Herrmann, Hupel, and lastly Storch, drew up their topographies and statistics of the empire. Still, however, the voluminous journals of the academicians lay unopened to this country, and the travels of Pallas, Guldenstädt, Georgi, Lepechin, Falk, the Gmelins, Fischer, and others were in England known only by the occasional mention

mention of their extraordinary value, with deserved encomiums on the talents and labours of their authors, in the reports of our countrymen on their return from a transient visit to St. Petersburg.

Having passed the greater part of the long reign of the late empress in her dominions, favoured for many years with the friendship and intimacy of two successive directors of the academy, with free access to its libraries and collections, and being personally acquainted with several of the travellers themselves, I presume to lay before the public this View of the Russian Empire, in which I have faithfully followed the authors abovementioned, and delivered my vouchers wherever it was necessary, as the reader will generally find at the foot of the pages.

I have bestowed much care and pains in the compilation of this work from the learned writers abovementioned and other authentic sources; and this is all the merit to which I pretend; yet would it be the height of arrogance to expect that it can be free from faults; these must be submitted to the indulgence of the reader: however, amidst the great variety of matter, and the several authors in various languages consulted, I am far more apprehensive that some things should, in spite of all my diligence, be found repeated, than that any thing of consequence

is omitted. Fine flowing periods and the finished graces of diction are certainly not to be expected in a work of this nature; and if I have not failed in rendering it both interesting and entertaining I shall be perfectly satisfied.

Russia, an empire but little known or regarded in the last century, at the opening of the present made her appearance all at once among the states of Europe; and, after a short trial of her powers, became the umpire and the arbitress of the North. The whole system of Europe took another form; the arctic eagle extended her influence to the regions of the Adriatic and the banks of the Tagus, while the lightning of her eye struck terror into the recesses of mount Caucasus and made the Hellespont tremble. The arts of Europe were transplanted and bloomed both on the shores of the Neva and those of the Irtysh; a new world was opened to commerce, and the sciences, the manners, the luxury, the virtues, and the vices of western Europe have found their way into the deserts of oriental Asia, and to the inhospitable coasts of the Frozen-ocean. The æra of these remarkable phenomena was the commencement of the eighteenth century*.

Arrived

* In the year 1697 Peter the Great began his first journey into foreign countries. In 1699 he concluded the amity with the Porte, by which he acquired Azof, and

Arrived now at the extreme verge of that period, it must be curious and instructive to look back and compare the two epochs together. To consider what Russia was at the beginning of this century, to see what the successors of Peter have built on the foundation laid by that great and aspiring genius, ~~what~~ progress has been since made by civilization, and what impression the rapid and violent introduction of foreign manners, the settlement of so many thousand foreigners, and the intercourse with foreign nations, have produced.

In order to satisfy himself on these particulars, the reader will here see a complete arrangement as far as it goes, of statements drawn from authentic sources, of facts related by eye witnesses of what they deliver, men of science sent out for the express purpose of collecting information on the state of the countries they were to visit, furnished on their expedition with every accommodation that could possibly be procured, for facilitating their inquiries and freeing their minds from all solitudes about collateral objects of

was enabled to construct a navy on the Euxine. In 1700 the battle of Narva was fought, where the Swedes for the last time shewed their superiority in discipline and the arts of war,

security and subsistence. The same generous patronage and care was continued to them on their return : they sat down in ease and affluence to commit the result of their inquiries to paper ; and the substance of what they relate will be found in the following pages. This is all that seems necessary for me to say ; and I humbly conclude in the words of the historian : “ Si in tanta
“ scriptorum turba mea fama in obscuro sit ;
“ nobilitate & magnitudine eorum, qui nomini
“ officient meo, me consolet.”

LONDON,

June 20, 1799.

INTRODUCTION.

ABOUT the middle of the year 1767, Catharine II. conceived the useful project of sending several learned men to travel into the interior of her vast territories, to enable themselves to determine the geographical position of the principal places, to mark their temperature, and to examine into the nature of their soil, their productions, their wealth, as well as the manners and characters of the several people by whom they are inhabited.

A country of such a prodigious extent as the russian empire, must naturally attract the notice of every man who wishes to increase his knowledge, whether it be considered in regard to the astonishing number of tribes and nations by which it is inhabited, the great diversity of climates under which they live, or the almost infinite quantity of natural curiosities with which it abounds. But the greater part of this country is still immersed in the profoundest barbarism,

and almost inaccessible to the investigations of the ordinary traveller. Here vagrant hordes of people, who, entirely addicted to the pastoral life, roam from place to place, flunning the social manners of towns and villages, negligent of agriculture, and leaving uncultivated and almost in a desert-state vast tracts of land blessed with the most favourable soil and the most happy temperature of seasons : there, peasants, and even in many places inhabitants of towns, slaves to a thousand prejudices, languishing in bondage to the most stupid superstitions ; brought up, besides, in the severest servitude, and, being accustomed to obey by no other means than blows, are forced to submit to the harshest treatment : none of those affectionate admonitions, those prudent and impelling motives, which usually urge mankind to action, make any impression on their degraded minds ; they reluctantly labour the fields of a hard master, and studiously conceal from his knowledge those riches which some accident, so desirable in other countries, should have led them to discover ; as they would only augment the number of their toils and the heaviness of their yoke. Hence that careless contempt for the treasures presented them by Nature, and the neglect of those bounties

the

she lavishes on them. Hence those immense deserts almost totally destitute of cultivation, and so many towns that are falling to decay.

Peter the Great, of too penetrating a view not to perceive both the evil and its causes, took all imaginable pains, and adopted the wisest measures to ameliorate the ~~condition~~ of an empire, so powerful from numberless other circumstances, to free his subjects by gentle degrees from the shackles of barbarism, to diffuse on all sides the benign light of arts and sciences, to discover the treasures concealed in his dominions, and to furnish agriculture with the remedies and assistances adapted to its improvement. His travels into several countries of Europe for the acquisition of such kinds of knowledge as were most applicable to the use of his dominions, are sufficiently known; as well as that in 1717 he honoured the royal academy of sciences at Paris with his presence, and expressed his desire the following year to be admitted a member; that he kept up a regular correspondence with that illustrious body, and that he sent to it, as the first essay of his ingenious and magnificent enterprises, an accurate chart of the Caspian, which he caused to be scrupulously taken on the spot. At the same time he fitted out and dispatched several men of letters to various
parts

parts of his empire; one of them to make the tour of Russia, and two others to proceed to Kazan and Astrakhan, to gain information of every thing of consequence to be known in those countries. In the year 1719, Daniel Amadeus Messerschmidt, a physician of Dantzic, was sent into Siberia, for the purpose of making inquiries into the natural history of that immense province, from which expedition he only returned at the beginning of 1727. This learned man did honour to the choice that had been made of him, by an indefatigable activity, and by the proofs he gave of his profound knowledge, not only in every department of natural history, but likewise in antiquities, as well as in astronomy, having carefully determined the elevation of the pole in all the places where he stopped.

As the northern regions, particularly those of Siberia, were as yet but little known, and as it was very uncertain whether the extremity of these latter might not touch upon America, Peter I. sent from Archangel two ships, with orders to proceed, by the White-sea and the Northern-ocean, into the Frozen-ocean, where they experienced the same disasters as had befallen the other vessels that had gone before them in this attempt; for one of the two was caught

caught by the fields of ice, and disabled from proceeding any farther; and as no tidings were ever heard of the other, it, in all probability, perished.

Peter I. was not discouraged by the failure of this undertaking; but he was carried off by death as he was preparing ^{his} expedition; he had given the charge of it to two danish captains, Behring and Spangberg, and a Russian named Tschirikoff, with orders to go to Kamtschatka, whence they were to sail for exploring the northernmost coasts of Siberia. The sorrowful event of the emperor's death made no alteration in these dispositions; and the plan was carried into execution, the same winter, by the empress Catharine, who sent a small company of literati, provided with a paper of instructions, which Peter had framed with his own hand. They returned in 1730, after having penetrated very far towards the north.

The empress Anne was desirous of prosecuting these important researches still farther, and ordered the erection of a new company, in which Behring was to be employed as captain of the ship. Kamtschatka was again the point of departure for making the principal discoveries, with orders to neglect nothing that might shed any light on the knowledge of the globe. One
part

part of this society was to navigate the northern seas, while the others were to repair by land to Kamtschatka over Siberia. These latter were to act conformably with the instructions of the imperial academy of Petersburg, and to employ themselves particularly in astronomical observations, geometrical operations, and descriptions relative to the political and natural history of the countries through which they were to pass.

John George Gmelin was one of the chief of those who undertook the journey by land; almost always accompanied by professor Muller, who had the care of the historical part. They reached as far as Yakutsk; where Krascheninikof, the assistant Steller, the painter Berkhan, and the student Gorlanof, quitted them to go to Kamtschatka, of which they collected the political and natural history, as well as that of the department of Okhotsk. M. de l'Isle de la Groyere likewise went thither with some land surveyors. Afterwards M. Fischer was sent in the department of political history; he reached very near to the province of Okhotsk, which he left in the design of returning*.

* For more particulars the reader is referred to the preface of Mr. J. G. Gmelin to the first volume of his travels in Siberia which appeared at Göttingen 1751. A french translation, or rather abstract of it, was given by M. de Keralio, Paris 1767.

In 1760, M. l'abbé Chappe d'Auteroche was sent into Russia, by order and at the expence of the king of France, for observing at Tobolsk the transit of Venus over the sun: his observations, published with great ostentation, contain not near so much as was expected from that academician; and many of the ^{ill.} which he relates had been already long since known.

The empress Catharine II. was determined to prosecute these useful investigations, and accordingly gave orders to the academy of sciences to make choice of a company of able and learned men to travel over different districts of the empire with attention and observation. The selection of the learned travellers, the helps that were granted them, the excellent instructions and advice that were given them, will be a lasting honour to that academy. The very names of a Pallas, a Gmelin, and a Guldentædt, already promised much. M. Lepechin had likewise acquired a reputation by different papers inserted in the academical collections; and the result of the labours of these enlightened men has been seen in the extensive utility which they have since produced. Very few of the accounts that have been given by travellers contain so great a variety of new and important matters. The journals of these celebrated scholars even furnish
such

such a great quantity of materials entirely new, for the history of the three kingdoms of nature, for the theory of the earth, for rural œconomy, in short, for so many different objects relative to the arts and sciences, that it would require, according to the judicious remark of M. Bekmann of Göttingen, ~~many~~ ^{several} years and the labour of several literary men only to put these materials in order, and properly to class them.

In order to form an accurate ~~idea~~ of the different objects to which our learned travellers were enjoined to direct their observations, it will be necessary to give an account of the instructions delivered to them by the academy at their departure. By these they were to make accurate examinations into—1. The nature of the soil and that of the waters. 2. The means of putting the desert places into cultivation. 3. The actual state of agriculture. 4. The most common diseases, both of men and cattle; and the methods of healing and preventing them. 5. The breeding of cattle, particularly sheep, and that of bees and silk-worms. 6. The fishery and the chase. 7. Minerals and mineral waters. 8. Arts, trades, and objects of industry. 9. They must also apply to the discovery of interesting plants: and, 10. To rectify the position of places, to make geographical and meteorological observations;

ations; to report all that relates to manners, various customs, languages, traditions, and antiquities; and mark down exactly whatever they should find remarkable concerning all these points.

All these different views were fulfilled in a superior manner by these gentlemen, and there is no exaggeration in what has been said, that natural history never at one time obtained so great an increase of its treasures, the inestimable fruit of the labours of these truly useful men; and their narratives are become a lasting monument of their zeal, their uncommon talents, and their unwearied activity.

SAMUEL GEORGE GMELIN, physician of Tübingen, began the course of his travels June 23, 1768, accompanied by four students, James Gliutsharef, Stephen Krascheninikof, Ivan Michailof, and Sergèy Maslof; having with them an apothecary named Joachim Daniel Luther; Ivan Borisslof a draftsman; Michael Kotof, a hunter by profession, whose business it was to stuff the animals; and a sufficient escort of soldiers. He directed his route, on leaving Petersburg, through Stararussa, Valdai, Torjok, and Mosco, towards Voronetch; where he took up his winter-quarters, and whence he afterwards passed through Ostrogosk, Pavlovsk, Kazanka,

Cimlia and Tſcherkaſk, to Azof. From this laſt place he ſet out, about the middle of Auguſt 1769, to proceed by Tzaritzin to Aſtrakhan; he paſſed the winter in that city, and only quitted it in June 1770; he traверſed, in this laſt half year, in the whole courſe of 1771, and part of 1772, the north of Perſia; viſited Derbent, Baku, Schalakky, Entzili, Peribazar, Ghilan, Mazanderan, returned to Entzili, where he paſſed the winter, and reſumed, in April 1772, the route to Aſtrakhan. The third volume of his journal cloſes with the deſcription of theſe countries. This able traveller was continually obliged to ſtruggle with adverſe events, while traверſing the northern provinces of Perſia; he had eſpecially to contend with ſickneſſes, and the difficulties thrown in his way by the khans of that kingdom; and he is deſerving of the title of a martyr to natural hiſtory, with the greater right, as, after having adorned his life with ſo many labours, he cloſed it under the weight of perſecutions, and in the miſeries of captivity*.

The

* He was ſeized upon, at 90 verſts from Derbent, in the diſtrict of Uſmey-khan, and there actually died in priſon. The emperer gave a gratification to his widow, after this deplorable event, by granting her one year's pay of the ſalary ſhe had aſſigned to her huſband during his travels, conſiſting of 1600 rubles. If the worthy Gmelin had not undertaken his

The greater part of the writings he left behind him were forced, not without great difficulty, from the hands of the barbarians.

PETER SIMON PALLAS, M. D. and professor of natural history, long famous in that branch of knowledge, took his departure from St. Petersburg towards the middle of June, 1768. In his progress he visited Novgorod, Valdai, Mosco, Vladimir, Kazimof, Murom, Arfamas, the country extending between the Sura and the Volga, and wintered at Simbirsk, of which he examined all the adjacent parts. The 10th of March 1769, he turned off to Samara, Syzran, Orenburg, crossed the countries watered by the Yaik, and repaired to Gurief-gorodok, which seemed then to be the general rendezvous of our academical travellers. Here he met, among others, the unfortunate professor Lovitz*, who had

second and unfortunate journey into Persia, rather as a merchant than as a literary man, and if he had not constantly gone by land, he would not easily have fallen into the hands of Usmey-khan.

* M Lovitz lost his life in a dreadful manner, during the time that the rebels, who produced so much confusion in Russia in the preceding war against the Turks, were ravaging the colonies of the evangelical brethren. Our naturalist-

had just established his observatory, his assistant Ichonodzof, and lieutenant Euler : M. Lepechin¹ was also at that time in the neighbourhood of Gurief. M. Pallas employed himself, during the whole of his stay in this place, in examining the coasts and the isles of that part of the Caspian that lay within his reach. Hence he returned by the same road, in order to go, by the way of Orenburg, to Ufa, where he arrived the 2d of October ; and after having spent there the winter, he set out, the 10th of March 1770, for the mountains of Ural, and the province of Isset : the 23d of June he reached Ekatarinenburg, where he made his observations on the great number of mines that are worked in that district ; he proceeded afterwards to the fortress of Tsche-liabinsk, whence, about the middle of December, he took his course to Tobolsk. M. Pallas

was taken at Dobrinka, where he thought himself in the greatest safety. A band of these rebels dragged him as far as the borders of the Slovla, where their chief had his quarters ; and, in the month of August 1774, he was there first impaled alive, and afterwards hanged. The assistants of Lovitz, Ichonodzof and his son, having found means of escaping, saved all his writings and a part of his instruments. Several farther particulars relating to this learned traveller, may be seen in Busching's *Wochentliche nachrichten*, 1775, p. 56 & sqq.

had

had sojourned the greater part of the winter at Tscheliabinsk, and traversed and examined, partly by himself and partly by his assistant M. Lepechin, and by professor Falk, almost all the government of Orenburg, when this latter also came, about the middle of March 1771, followed shortly after by his assistant Georgi, to join him in this town of Tscheliabinsk. Captain Ritschkof, who had hardly quitted M. Pallas all the winter, now left him, and set out upon another journey.

M. Pallas finally left his winter-quarters at Tscheliabinsk the 16th of April 1771, directed his course by the Omsk, followed the course of the Irtysh, visited the mines in the environs of Kolyvan, went to the Schlangenberg (or serpentine mountains) and to Barnaul; where he found Mr. Falk sick, who was come from Omsk by the steppes or deserts of Barabin. From Barnaul M. Pallas proceeded to Tomsk, and arrived the 10th of October 1771 at Krasnoyarsk upon the Yenissey, which he had made choice of for his winter-quarters. It was there that the student Suyef came up to him again, in the month of January 1772; he had made, in the course of the last summer, a journey the length of the Oby towards the Frozen-ocean, and was returned to communicate his observations to

M. Pallas, who was again joined, in the month of February, by M. Georgi, who had hitherto served as assistant to M. Falk, and afterwards by the students Bykof, Kaschkaref, and Lebedef, whom M. Falk, forced by the bad state of his health to return, had sent to M. Pallas.

Our learned traveller left his winter-quarters the 7th of March 1772, to proceed, with M. Georgi and two students, by Irkutsk to the lake Baikal, whither he had already sent M. Sokolof in the month of January. After having seen the environs of that lake, Selinginsk and Irkutsk, he regained, the 12th of July, the route of Krasnoyarsk, where he set up his winter-quarters, after having visited the Sayane mountains. In the month of January 1773, they set out on their return, in which they took the way of Tomsk, Tara on the Irtysh, Kazan, Sarapul, Yaitskoi-gorodok, Astrakhan, and through the country that borders the Sarpa to Tzaritzin, where he met again M. Sokolof, whom he had sent to visit the steppe or desert of Kuman. After having wintered at Tzaritzin, and made several excursions from that city towards the Volga, he returned at length by Mosco to St. Petersburg, where he arrived the 30th of June 1774.

We see, by this short sketch of M. Pallas's travels, that he went over a great part of the same countries which the first, third, and fourth volumes of the travels of J. George Gmelin had described. But this ought not to induce us to regard the labour of M. Pallas as a repetition, which might easily have been dispensed with; the plan of M. Gmelin differed entirely from his, and was incomparably more contracted, as to the department of natural history. Besides, professor Pallas took quite other courses than those of M. Gmelin: and Siberia had in the interval acquired an altogether different face, as well by the extension of its frontiers, as by the establishments that have increased its population, by the new and important mines that have been put in produce, and the founderies that have been erected there; so that it cannot fail of gaining infinitely by any comparison that might be made between his accounts and those of Gmelin.

JOHN AMADEUS GEORGI, member of the society of natural history at Berlin, was at first destined by the imperial academy to relieve professor Falk, who was commissioned with what was called the expedition of Orenburg, and then known to be in a bad state of health. He set out, in consequence, the 1st of June 1770, took the

route by Mosco and Astrakhan, and met M. Falk in the steppe of the Kalmuks, very near to an armenian caravan. He followed him across that steppe to Uralsk (at that time Yaitskoi-gorodok) and to Orenburg, where they remained till the end of the year. At the beginning of 1771, they travelled by consent into the province of Isset, M. Falk along the lines of Orenburg, and M. Georgi by the Bashkirèy and the Ural. He took, during the illness that detained M. Falk, several little journies from Tschelyœba, capital of the province, towards several places, for observing a variety of natural curiosities, and the nations of the country; finding themselves at length in a capacity to continue their courses, at the latter end of June M. Falk proceeded by Isetskoi to Omsk on the Irtysh, and directed M. Georgi to come and join him at the last-mentioned place by the new lines of Siberia, or of Ischim on the frontiers of the Kirghises. They then proceeded in company across the steppe of Barabin, to see the silver mines of Kôlyvan near the Oby. They went also afterwards to visit Barnaul, and, as much as a serious malady, with which M. Falk was attacked anew, would permit, the mountainous district of the mines of Altay, and the founderies that depend on Barnaul. Towards the end of November
they

they continued their journey, following the first elevations of mount Kusnetzk, to Tomsk. It was in this city that M. Falk received from Petersburg a permission to return, on account of his ill state of health. M. Pallas, the chief of the expedition, now remaining alone in the vast regions of Siberia, M. Georgi, as we have already seen, was entered of his company, and travelled, though separately, under his direction.

We shall here give a short intimation of the places visited by M. Georgi: from Irkutsk he proceeded to the lake Baikal, of which he drew an excellent chart, and thence into Dauria, for the purpose of examining the mines of that name, and into the district of the mines of Arguskin; thence he returned by Irkutsk to Tomsk, Tara, Tobolsk, Isetskoi, Iliña, Ekatarinenburg, and Ufa, visiting all the mines of those countries; he returned thence by Perme, on the Ural of the Baschkirs; once more from Ufa to Tzaritzin and Orenburg; and lastly along the Volga, from Astrakhan to Petersburg by Saratof, Bolgari, Kazan, Makarief, Pavlova, Nishney-Novgorod, Yaroslavl, and Tver. On the 10th of September 1774, he arrived in the imperial residence.

On coming to Kazan in March 1774, M. Georgi found professor Falk still there, and extremely ill, which he terminated; together with his life, by his own hand a few days after. Two or three particulars of his biography * will not be disagreeable to the reader.

M. Falk was born in Westrogothia, a province in Sweden, about the year 1727. He studied medicine in the university of Upsal, and went through a course of botany under the celebrated Linnæus, to whose son he was tutor. He publicly defended the dissertation† which that famous botanist had composed on a new species of plants, which he called *Astromeria*. In the year 1760, when M. Georgi for the first time was at Upsal, the latter was already so deeply affected with depression of spirits, that M. de Linné, in the view of obliging him to take exercise and dissipation, sent him to travel over the island of Gothland, to make a collection of the plants it produces, and the various kinds of corals and corallines which the sea leaves on its shores. This voyage was attended with no diminution of his distemper, which found a

* From the journal of M. Georgi.

† In the collection known under the title of *Linnæi amœnitates academicae*.

continual supply of aliment in a sanguine melancholy temperament, in a too sedentary way of life, and in the bad state of his finances.

Professor Forskael having left Upsal for Copenhagen in 1760, Falk followed him thither, in the design of applying, by the advice of M. de Linné, to be appointed assistant to M. Forskael in his famous journey through Arabia; but, notwithstanding all the pains that M. Ceder and several other men of literary reputation at Copenhagen took in his behalf, his application failed, as the society that were to go on that important expedition was already formed. Obligated, with much discontent, to return, he herborised as he travelled and enriched the *Flora Suecica* with several new discoveries.

A man in office at St. Petersburg, having written to M. Linné to send him a director for his cabinet of natural history, M. Falk accepted the post, which led him to the chair of professor of botany at the apothecaries garden at St. Petersburg, a place that had been vacant from the time that it was quitted by M. Siegesbek. His hypochondriac complaint still continued to torment him. When the imperial academy of sciences was preparing in 1768 the plan of its learned expeditions, it took M. Falk into its service,

service, though his health was uncertain. He was recalled in 1771; but, having got only to Kazan in 1773, he there obtained permission to go and use the baths of Kisliar, from which he returned again to Kazan at the end of the year with his health apparently better.

But his disease soon returned with redoubled violence. From the month of December 1773, he had never quitted his bed, nor taken any other nourishment than bread dried in the Swedish manner (*knäkebröd*), of which he scarcely took once a day some mouthfuls dipped in tea. At first he received the visits of a few friends; but afterwards denied himself to them, and was reduced to the strictest solitude. When M. Georgi went to see him, nothing seemed left of him but a skeleton of a wild and terrifying aspect. The few words he drew from him consisted in complaints occasioned by a host of diseases which kept his body in torture, and threw him into the most cruel sleeplessness. The last evening M. Georgi kept him company till midnight. He spoke little, and said nothing that could give reason to suspect the design he was meditating. His hunter, and at the same time his trusty servant, offered to sit up with him the night; but he could not be persuaded to consent.

M. Georgi

M. Georgi being requested the next day, March 31, to come to the lodging of the unfortunate gentleman, he found him lying before his bed, covered with blood; beside him lay a razor, with which he had given himself a slight wound in the throat, the fatal pistol, and a powder-horn; all together presenting a tremendous spectacle. He had put the muzzle of the pistol against his throat, and, resting the pommel upon his bed, he discharged the contents in such manner, that the ball having gone through his head, had stuck in the cieling. His soldier had seen him still sitting up in his bed at four o'clock, at which time he usually fell into a short slumber. In his chamber was found a note written the evening before, betraying throughout the distracted state of his mind, but nothing declaratory of his design, or that was of any importance.

M. Falk, like all hypochondriac persons, was not very communicative, and on certain occasions was distrustful. But at the same time he was of a sedate temper, complaisant, and upright, which made it a very easy matter to bear with him, and secured to him the indulgence of all his acquaintance. His extreme sobriety had enabled him to make some savings from his pay, though he was very beneficent; it was not there-

therefore indigence that drove him to this act of violence. He was of a cold constitution, preferring solitude and quiet to society, to the company of his friends, and to ordinary amusements, which yet he did not shun, except in the latter period of his life. As to religion, he shewed on all occasions more respect for it, than any strong effusions of zeal. It was solely to be ascribed to the violence of his distemper, and the weakness of mind which it brought on, that led him to put a period to his days. The fate of this unfortunate scholar was generally and justly lamented*.

In the number of those who were of the expedition of M. Pallas was also captain Nicholas RYTCHKOF, son of Peter Ivanovitch Rytchkof, counsellor of state, who made himself famous for his topography of Orenburg. Rytchkof the son, in 1769, went over some districts of the

* His papers were found in the greatest disorder. They contain, however, very useful and important relations. He particularly made it his business to inquire about the Kirghises and other tartarian nations; and as he frequently remained for the space of nine months together in the same place, he was enabled to procure satisfactory notions concerning the objects of his investigations. The imperial academy, in 1774, appointed professor Laxmann to arrange his manuscripts in order for publication; which was done accordingly.

governments of Kazan and Orenburg; proceeded eastwards from Simbirsk, and thence northwards beyond the Kama, declining afterwards to the north-east along the Ural mountains, which he traversed in his way to Orenburg. In 1770 he visited the countries extending the length of the western bank of the Bielaya, as far as the Kama, which he coursed as far downwards as Kazan; then crossing the province of Viatka, he passed on to Glinof, came into Perme, and surveyed the environs of Solikamsk; thence, descending along the Kama nearly as far as Kungur, he proceeded by Ekatarinenburg to Tschelyabinsk. In 1771, on departing from Orsk, he visited the steppe of the Kirghis-kozaks on this side the Yaik, passed the rivers Irgis and Turgai, came as far as the mountains of Ulu-tau, thence bore away to Ust-visk and Orenburg, and came at last, by a part of the province of Ufa, quite to the Dioma.

M. LEPECHIN, by birth a Russian, who, after having gone through his first studies at the imperial academy of sciences at St. Petersburg, went to pursue a course of medical study at Strasburg, where he was admitted M. D. and was received in 1768 as adjunctus, and in 1771 member of the same imperial academy, was at the head of another of these expeditions. He set

out the 8th of June 1768, from Petersburg, proceeded straight to Mosco; thence by Vladimir, Murom, Arsamas, Alaty, consequently by the government of Nishney-Novgorod, to Simbirsk in the province of Kazan : from which place he set out in the month of August, to visit the course of the river Tschheremschan, which divides the government of Kazan from the province of Stavropol, and thence travelled over various parts of the government of Orenburg. In autumn he reached Stavropol, passed the winter at Simbirsk, and the spring of 1769 in the province of that name : the following summer he came to Astrakhan; from which city, in the month of August, he made an extremely remarkable journey to Gurief, crossing the steppe which extends between the Volga and the Yaik; from Gurief he went up along the Yaik as far as Orenburg, and reached in the month of October the little town of Tabynsk situate near the centre of the Ural of Orenburg on the river Bielaya, where he wintered. In the month of May following, he pursued upwards the course of the Bielaya, examined the mountains, came in July to Ekatarinenburg, struck forwards into the Ural, and attained, beyond the Kungur, to the summit of the highest of the Ural of Orenburg, whence he returned to Ekatarinenburg,

burg, and passed the winter at Tiumin in the province of Tobolsk.

In the month of May 1771, he reached the summit of the highest mountain of the Ural-chain, which runs between Verkoturia and Solikamsk, visited, during the summer, the province of Viatka, proceeded by Ustiug to Archangel, where he embarked in order to examine the coasts of the White-sea. He made Archangel his winter-quarters that year. The following year, 1772, was employed by our learned traveller in making a second course on the sea just mentioned, along the shores and the isles lying to the left of Archangel, as far as the western and northern coasts, proceeding thence to the mouth of the White-sea: he afterwards doubled Kanin-nofs, and at length returned by the gulf of Mezen to Archangel, whence he set out, towards the close of the year, for St. Petersburg. During the spring and summer of 1773, he visited the environs of Pskove, Velikiye-Luki, and Toropetz, with divers other parts of the governments of Pskove and Mohilef: in the month of August he went from Polotsk along the Duna to Riga; whence he proceeded, following the sea-shore, to Pernau, then to Valk, Neuhausen, and Pskove: after which he returned in December

to St. Petersburg, and probably thus terminated the travels on which he was sent.

Dr. J. GULDENSTÆDT took his departure about the middle of June 1768, from St. Petersburg, in order to proceed by Novgorod along the western coast of the lake Ilmen, by Porkof, Staraja-russa, and Toropetz, to Mosco, where he tarried from the 11th of September to the 8th of March 1769; when he set out for proceeding by Kolomna, Epifani, Tula, and Eletz, to Voronetch; thence to Tavrof, to Tambof, to the fortrefs of Novochoperfskaia; and, after having coursed along the rivers Chopa, Medvieditza, and the banks of the Don, he arrived the 11th of October at Tzaritzin, where he remained till the 23d of November: he afterwards went to Astrakhan, where he arrived the 4th of December, and then proceeded to Kitzliar, a russian frontier town on the river Terek. This place he quitted in 1770, to visit the countries watered by that stream, by the Kuubalni, the Soontscha, the Akfai, and the Koisa, with the north-east parts of mount Caucasus; being often obliged in this course to return to Kitzliar, chiefly because of the little safety he found in traversing those parts. It was for this reason, and on account of an illness that

8

detained

detained him, that he did not reach Georgia that year.

The 10th of February 1771, M. Guldenstædt left Kitzliar, with a detachment of russian troops, for Offetia, which is a district of mount Caucasus ; and so soon as the 17th of March he was already returned to Kitzliar, which he quitted for the last time the 18th of May, in order to go to the hot baths on the borders of the Terek. One of the most considerable of the princes of the lesser Kabarda accompanied him, and shewed him, during the months of July and August, all that country, with the northern part of the caucasean mountains inhabited by the Dugores. Thence he returned a second time to Offetia on the Terck, whence he departed the 11th of September under the escort of some hundreds of Offetians, whom the tzar Heraclius had taken into his pay, and happily arrived with them in Georgia. He was, the 25th of September, at Duschet, a town of Karduelia. The 9th of October he left that country, in order to proceed to the river Kur, at the same place where tzar Heraclius had appointed his troops to make their general rendezvous, and which was only 15 versts distant from Teflis, its capital. It was there that M. Guldenstædt had an audience in form of the tzar, who embraced him, made him

fit down in his presence, and promised to grant him every assistance that he should want; which promise he afterwards fulfilled. He made the campaign with the tzar, who pushed with the main body of his army to the distance of above 120 versts up the course of the Kur; and he returned to Teflis with that prince the 14th of November. He left this place again the 21st of February 1772, for Kakhetia, always in the suite of the tzar, and passed the whole of the month of March in that province of Georgia. He traversed, in the month of May, those provinces of Turcomania which are in subjection to tzar Heraclius. The 20th of June he went, for the last time, to Teflis, in the resolution of quitting Georgia, after he should have made the tour of the provinces of tzar Solomon, and to return to Mosdok on the river Terek. On the 18th of July he made his obeisance to that tzar, who had set up his summer-camp on the southern bank of the river Rion, some versts below the fortress of Minda. The prince gave our traveller a very gracious reception. The 5th of August 1772 he quitted the district of Radscha, which makes part of the kingdom of Immeretia, and repaired to Kutatis, the capital of the lower Immeretia; then made the tour of the frontiers of Mingrelia and Guria, the eastern part of Immeretia

Immeretia and middle Georgia. Tzar Solomon had given him an escort of 300 Immeretians to attend him on his tour. As he was preparing to proceed farther on, he was forced for some time to suspend his march, as the greater part of his people had fallen sick. In this interval he received a supply of men, horses, and provisions, from a georgian nobleman whom a little before he had cured of an ailment. On the 1st of October he reached the last grusinian or georgian village, where he was again obliged to stop for a month, in consequence of advices that he received of 300 Asletinians who were waiting on the shore of the Terek to attack and to plunder him. In the interim the major-general of Medem, being informed of his situation, sent a detachment of 600 men with two pieces of cannon, at the arrival of whom the robbers dispersed. By this means M. Guldenstädt happily regained the frontiers of Russia, and returned first to Mosdok, and afterwards to Kisliar. In April 1773, he made an excursion to Petersbade [the baths of Peter], whence he returned the succeeding month and immediately set out for Mosdok, and in the month of June went upwards along the Malka. From that river he turned off towards the eastern branch of the Kuma, and proceeded to the five mountains

or Besch-tau, which form the highest part of the first elevation of Caucasus: he visited the mines of Madschat, from which he took the route of Tscherkask, where he arrived the 24th of July. From this last town he made a tour to Azof; being returned to Tscherkask, he proceeded by Taganrok along the sea-coast, crossed the river Kalmius, following at the same time the Berda and the new lines of the Dniepr, and came by the eastern bank of that river to Krementschuk, the capital of the government of New-Russia, where he arrived the 7th of November, and passed the rest of the winter. He had not yet quitted this government, though already on the way to the Crimea, when he received orders on the 20th of July 1774, as did all the other academical travellers, to return to St. Petersburg. Accordingly he turned back, and came by Krementschuk, and along the lines of the Ukraine as far as Bielefskaia-krepost; thence bent his course over Bachmut, and beyond towards the south-east and the east, as far as the rivers Mius and Lugantschik. Being returned to Bielefskaia-krepost, he left it for the second time the 16th of December, and came by Kief to Serpukof; where, having collected all the persons and all the effects belonging to his expedition, he took his departure the 20th of
of

of December for Mosco, and in the course of March arrived at St. Petersburg.

Such is the general outline of these interesting travels from which the learned of Europe have received so much information, and which properly finds a place in the introduction to a work that owes so great a part of its materials to the labours of these academicians. The discoveries made by the Russians at sea at various epochs, and particularly during the reign of Catharine II. have been so faithfully laid before the public by Mr. Coxe in his well-known work professedly written on that subject, that it would be unnecessarily swelling the bulk of these volumes to say any more of them here. However, it is impossible to take leave of these expensive and important missions without testifying our acknowledgment, with that ingenious and candid writer, of the benefits that have accrued to science from these learned and laborious investigations, and to join with him † and every friend to rational inquiry, “in the warmest admiration
“ of that enlarged and liberal spirit, which

* See Bachmeister's *Russische Bibliothek*, tom. i. ii. and iii. where very circumstantial accounts of all the several courses pursued by these travellers are to be found.

† Coxe, *Russian Discoveries between Asia and America*, preface, p. xi.

“ so strikingly marked the character of the late
“ empress of Russia, who, from her accession to
“ the throne, made the investigation and dis-
“ covery of useful knowledge the constant object
“ of her generous encouragement. The au-
“ thentic records of the Russian history were by
“ her orders properly arranged; and permission
“ was granted of inspecting them. The most
“ distant parts of her vast dominions were at her
“ expence explored and described by persons of
“ great abilities and extensive learning; by
“ which means new and important lights have
“ been thrown upon the geography and natural
“ history of those remote regions. In a word,
“ this truly great princess contributed more
“ in the compass of only a few years, towards
“ civilising and informing the minds of her
“ subjects, than had been effected by all the
“ sovereigns her predecessors since the glorious
“ æra of Peter the great.”

CONTENTS

OF THE

FIRST VOLUME.

BOOK I.

Of the natural state of the empire.

SECTION I. Amplitude, boundaries, and division of the empire, page 1.

SECTION II. Climate and quality of the soil, 21. Frost and snow, advantages arising from, 27. Bones and teeth of elephants, &c. found in Siberia, 29. General division of the empire, 30. Description of Taurida, 33. Meteorological observations of the academy, 41. The covering of the Neva with ice, 47. Departure of the ice, 48. The empress Anna's palace of ice, 49. Effects of the cold, 53. Inundations of the Neva, 54. General remarks, 66. Nature of the soil, 69. Arable land, 70. Meadows, 73. Forests, 75. Mountains, 79. Steppes,

Steppes, 81. Mosses, 84. Wastes, 86. Pasture grounds, 87. Salt places, 88. Mines, 93. The mountains of russian Lapland, 107. The Valday mountains, 122. The mountains of Taurida, 130. The Ural mountains, 137. The Altay mountains, 145. The Ubinskoy mountains, 157. The Sayane mountains, 163. The mountains of Kamtschatka and the eastern islands, 174. Of the principal plains of Russia, 176. The steppe of Petshora, ib. The steppe of the Dniepr, 177. The steppe of the Don and Volga, 178. The steppe of the Volga and Ural, 179. The steppe of the Irtysh, 180. The steppe of the Oby and Yenissey, 181. The steppe of the Yenissey and Lena, 182. The steppe of the Lena and Indighirka, ib.

SECTION III. WATERS. Of the seas forming the boundaries of the russian empire, the Frozen or the Northern ocean, 182. The Eastern or the Pacific ocean, 185. The peninsula of Kamtschatka, 186. Behring's island, 189. The Copper island, The Kurilskoy islands, 191. The Aleutsky islands, 203. Harbours in these seas, 208. The Euxine, or Black-sea, 211. The Baltic, its harbours, and islands, 212. Dago, 213. Cesel, 214. Mohn, 217. Ruun, 219. Dagerort, 222. Vorms, Nuk, and Kassar, 224. Hochland, &c. 225. Cronstadt, 228.

Of the inland seas and principal lakes of Russia.— The Caspian, 232. The Baikal, 241. The Ladoga, 242. The Onega, 243. The Peipus, 244. The Ilmen, &c. 247.

Of the chief navigable rivers of Russia.—The Duna, 248. The Neva, 252. The Dwina, &c. 260. —Rivers that fall into the Frozen-ocean: The Petshora, 261. The Oby, 262. The Tobol, 264. The Yenissey, 265. The Khatanga and the Lena, 267. The Yana, 268. The Indighirka and the Kovyma, 269. Rivers that flow into the Eastern or Pacific ocean: The Anadyr, 269. The Kamtschatka and the Amoor, 271.—Rivers that fall into the Caspian: The Yemba, 271. The Ural and the Volga, 272. The Terek, 276.—Rivers that fall into the Euxine: The Kuban, 278. The Don, 279. The Dniepr, 281. Mineral waters, 283. Vitriolic waters, 188. Bituminous waters, 292. Incrustaceous waters, 293. Canals, 294.

B O O K II.

Historical View of the Nations of the Russian Empire.

SECTION I. Slavonians, 307. Aborigines of Russia, 310. Rurik, 316. Oleg, 317. Alexander Nefsky, 320. Partition of the Russian empire, *ibid.* Extinction of the dynasty of Rurik, 323. Character and manners of the Russians, 332. The Kozaks, 390. Their form of government, 409. Siberian Kozaks, 445. The Poles, 449. The Servians, 454. Lithuanians, &c. 455. Livonians, 460. Courlanders, 463.

SECTION

SECTION II. Finns, 468. 481. Norwegians, 470. Laplanders, 474. Esthonians, 484. Lettonians, 490. Livonians, 504. Estonians, 527. Yummala's temple, &c. 528. The Syriænes, 532. The Vogules, *ibid.* The Votiaks, &c. 534. The Mordvines, 536. The Ostiaks, 537. Some particulars from the Chronicle of Henry the Lette, 539. Christianity in Livonia, 540. Meinhard the monk, 542. Superstitions of the Livonians, 543. Crusade against the heathens in Livonia, 545. Haaks of land explained, 547. Knights Templars, 549. Biblical plays acted at Riga, 551. Good deeds of Archbishop Andrew, 557. Progress of Christianity more slow in Esthonia than in Livonia, 556. Curious baptisms, 558. Christianity proceeds more rapidly, 559. Papal legate in Riga, 561. Effects of conversion, 561. Knowledge of the countries among the Romans, 563.

A V I E W OF THE RUSSIAN EMPIRE.

B O O K I.

OF THE NATURAL STATE OF THE EMPIRE.

SECTION I.

Amplitude, boundaries, and division of the empire.

BY Russia is sometimes understood the whole russian empire; yet these two expressions have properly a very different signification. Russia implies those principalities and provinces which for many ages past have been inhabited by Russians*. But it is well-known that there are several Russias, namely: 1. Great Russia, which has always bore the name of Russia in

* For about 1300 or 1400 years, as far back as authentic history reaches: this however is principally to be understood of Great and Little Russia.

the strictest import*, and comprises those large tracts of country, principalities, viceroyalties, and dukedoms which have uninterruptedly composed the russian dominion; as Mosco, Vladimir, Novgorod, Pskove, Perieflaf, Riasanskoi, Kaluga, Tula, Yaroslaf, Kostroma, Tver, Vologda, &c.

2. Little Russia, comprehending the Ukraine†, or in general the present three governments of Kief, Tschernigof, and Novgorod-Sieveriskoi‡.

3. White Russia, by which, for a long period of time, was meant the principality, or the present government of Smolensk; to which are now reckoned the two governments of Pologotzk and Mohilef, still sometimes called the white-russian territory: otherwise the name of White Russia is no longer heard of. To these were added, 4. New Russia, by which were denoted the large tracts of country near the Ukraine, towards Poland and the turkish dominion; namely, New Servia and the province St. Elizabeth, which now belong to the government of Ekatarinogorod, and therefore its name has fallen into disuse. The three last have not always been united with Great Russia,

* To take notice of its old obsolete names is the province of the antiquarian; and here would be out of place.

† Which word signifies *the borders*.

‡ It was long separated from Great Russia; but united to it again in 1654.

But,

But, by the russian empire, is likewise understood, not only those, but also such kingdoms, countries, and provinces as have been at various times since added to it by conquests and appropriations; as, 1. The kingdom of Kazan, which was conquered by tzar Ivan Vassillievich in 1552, at present consisting of several governments. 2. The kingdom of Astrakhan, taken by the same monarch*; at present likewise divided into several governments. 3. The vast country of Siberia; which, by calculation, contains upwards of ten millions and a half of square versts, comprehending within it several kingdoms, taken by roving Kozaks on their own account, and then surrendered to the tzar, who completed the conquest; this at present consists of several, but those the most extensive governments. 4. The provinces on the shores of the Baltic, captured from the Swedes by Peter I. and for ever incorporated with the russian empire by two treaties of peace; namely, Livonia, Esthonia, Finland, and Ingria, or the present governments of Riga, Reval, Viborg, and St. Petersburg. 5. The countries taken from Poland; now the governments of Polotzk and Mohilef, which the empress Catharine II. united to the empire. 6. The territory she an-

* Kabarda, likewise, soon afterwards submitted.

nexed to Russia by the peace concluded with the Turks in 1774. 7. The Krim and the Kuban, or the province of Taurida and the government of Caucasus, united to the empire by that sovereign in 1783. 8. The tributary islands in the eastern ocean, added to Russia in the present century. 9. The countries that have more recently submitted to the russian supremacy, namely, Kartuelia or Kartalinia, &c. 10. The possessions in America, consisting partly of islands, partly of the firm land of California, where the principal establishment is called Donalesk. 11. Some other countries incorporated with the empire at various periods; as, the Kirghiskaisaki, of the middle and little horde, who submitted themselves in 1731, and several others.

Hence it appears that the russian empire has not always been of such magnitude as at present. In the thirteenth century even Lithuania was not so far from Mosco* as now. From this slight inspection it is manifest that the amplitude of the empire is far greater than that of the largest monarchy in antient or modern times. Accordingly, the empress, in her letter of grace to the russian nobility in 1785, expresses herself in

* The proper name of this capital is Moskva; but Mosco is grown into such familiar use by long established custom, that we should no more think of altering it than of reducing Warsaw to its right name of Warschau, or calling the Tartars by their proper name Tatai.

the following manner : “ The russian empire is
 “ distinguished on the globe by the extent of its
 “ territory, which reaches from the eastern
 “ borders of Kamtschatka to beyond the river
 “ Duna which falls into the Baltic at Riga :
 “ comprising within its limits a hundred and
 “ sixty-five degrees of longitude ; extending
 “ from the mouths of the rivers Volga, Kuban,
 “ Don, and Dniepr, which fall into the Cas-
 “ pian, the Palus Mœotis, and the Euxine, as
 “ far as the frozen ocean, over two-and-thirty
 “ degrees of latitude.” The same number of
 degrees is assigned it by this sovereign, in her
 instructions to the commission for framing a code
 of laws. But, from her own words, it plainly
 appears, that she only takes notice of the coun-
 ties contiguous to each other, according to the
 general extent ; but none at all of the islands,
 or the numerous promontories and points of
 land that strike out from them. The islands in
 the eastern ocean are not once mentioned.
 Even the isle of CEsél, with its western pro-
 montory, reaches several degrees farther than
 the river Duna. If we take all these into the
 account, the russian empire, according to the
 newest and best charts, will be found to extend
 from about the 43d to the 78th degree of north
 latitude ; and from the 39th to the 215th degree

of longitude; this last however including the islands lying in the eastern ocean. M. Busching differs from this statement, thinking its longitude, or the extent of it from west to east, to extend from the 40th to the 230th degree, if we admit that the newly-discovered islands taken possession of by the Russians between the north-eastern parts of Asia and America reach so far. But this seems to be allowing too much. He affirms the empire to have, from north to south, from 20 to 25 degrees of latitude. This again is manifestly too little, as the abovementioned decisive statement of the empress, in concurrence with the best maps, determine the latitude quite otherwise.

Without reckoning the islands, the empire extends in length above 9200 english miles, and in breadth 2400. — From Riga to Anadyrskoi-ostrog, the distance is 11,298 versts. — The kalendar of the imperial academy at Petersburg sets it down at somewhat less. If we draw a line across Mosco, from Riga to the haven of Peter and Paul, as the two extreme boundaries of the continent, we shall find it only 10,936 versts; from Riga to Mosco being 1018, but from thence to Petropavlofskoi port, 9918 versts. On the contrary, according to that kalendar, the breadth is much larger. From Kertch to Mosco is reckoned

reckoned at 1477, and from thence to Kola 2109 versts; though it is notorious that these two places are not by far the extreme boundaries*.

With regard to the appellatives, Red, White, Black, &c. some farther explanation seems necessary. It is well known that the state of Poland contains some provinces that bear the name

* In order to render the extraordinary magnitude of the russian territory more apparent by a comparison, let us adduce to the above statement the data which one of the best informed historians has given of the extent and circumference of the roman monarchy at the height of its grandeur. 1. At that time the roman empire contained about 1,600,000 square miles; therefore exactly as much as only the european part of Russia. 2. The greatest length of it, from the Euphrates to the western ocean, amounted to 3000 miles, and the greatest breadth, from the wall of Antoninus to the pillars of Hercules, 2000 miles. If we travel the length of the russian empire, we shall find it to be, from Riga to Anadyrskoistrog, 9684 miles, and thence to the haven of Peter and Paul, in Kamtschatka, 1750 more. 3. The possessions of the Romans extended somewhat short of 32 degrees of latitude; Russia comprises 35½. *Gibbon—Roman empire, 4th vol. i. p. 33.* — But, if we consider that the dominion of the Romans extended over the finest part of the temperate zone (from the 24th to the 56th degree of north latitude), and that the ground in the whole circuit of that territory consisted of the most fertile and productive countries of three quarters of the world, this seeming superiority immediately vanishes.

of Russia, without however being at present a part of the russian empire. Of this sort is the province of Red Russia in the lesser Poland, of which only the country of Chelm has remained to the Poles ; also lithuanian Russia in the grand duchy of Lithuania, comprehending within it White and Black Russia, partly come back to the russian empire to which it originally belonged, being governed in the twelfth century by russian princes at Polotzk, descended from the princes of Kief. It is highly probable that even the whole of Red and Black Russia were formerly hereditary provinces of the russian empire, of which perhaps proofs are still in being among the archives of Russia. Without stopping here, however, to discuss what sort of title Russia may have to any such succession ; it is but right to mention that we have not any where been able to find a satisfactory account of the origin of these names and their proper signification. Perhaps they may have been entirely without any ; arising from accident, mere arbitrary denominations of certain tracts of country inhabited by Russians. At least this supposition is warranted by a custom observed in remoter times by the flavonian nations. Thus, concerning Servia, we know that the illyrico-servian empire was antiently called Red Servia ; the german Sorbenland, White Servia ; and the territory of Servitza, the Black Servia,

Servia. In like manner, the Crovats, as long as they dwelt in Bohemia, gave the country the name of Bielo Crobátia, that is, White Croatia. A part of Dalmatia being then styled by them Red Croatia. — Hence we might be led to conclude that the appellations White, Red, and Black Russia, must be of great antiquity. In the mean time, it must be confessed that Mr. Muller, so justly famous for his researches into russian history, is of a different opinion. As his thoughts on this subject contain much information, they deserve to be noticed here. He says : All the russian annals testify, that antiently there was but one undivided Russia under that general denomination, which extended toward the west, nearly upon the Vistula. The names of Little and White Russia were not heard of till after some principalities were taken in the 14th century by the lithuanian princes, and in the sequel incorporated with the kingdom of Poland. What bears the name of Red or Tschervonian Russia, it is true, received its denomination from the tshervenshian towns that form the principal part of it ; but White Russia was singly and alone thus named by the Poles and Lithuanians, in order to distinguish it from the rest of the russian empire ; which they styled Great Russia, not so much in regard to Little Russia, as to the spaciousness of its extent. — Russia was much weakened by the
excision

excision of several of its principalities as well as by the inroads of the Tartars : but after the grand duke Ivan Vassillievitch I. had united the majority of them under his sole sovereignty and thrown off the tartarian yoke, he first styled himself MONARCH OF ALL RUSSIA; which title was continued till the time of tzar Alexey Michailovitch ;* for the conquest of some districts in Little and White Russia, made by the grand duke Vassilli Ivanovitch and the tzar Ivan Vassillievitch, were only of some particular towns and principalities, whereof several were in the sequel forced back by their former masters. But when tzar Alexey Michailovitch, in the year 1654, had taken under his dominion the little-russian Kozaks, together with their towns and the whole population of Little Russia, he began to style himself SELF-RULER [AUTOCRATOR] OF GREAT AND LITTLE RUSSIA; in testimony whereof there is still a decree of this tzar's, bearing date July 1, 1654. This monarch, in the same year, took the town of Smolensk by force of arms, and returned to Mosco; but prior to his expedition for the conquests in White Russia and Lithuania, being indubitably persuaded that he should reduce the regions formerly ravished from Russia to submission, he caused to be inserted in the tzarian titles, the words : OF ALL RED AND LITTLE AND WHITE RUSSIA; the first

use of which appears in the *Universal* of the 21st of February 1655, as at that time Mohilef, Orsha, Vitepsk, Polotzk, Dunaburg, Borissf, Minsk, Vilna, Grodno, &c. together with all their towns and dependencies, were actually conquered. Sweden alone threw obstacles in his way; while the Poles were making flattering promises to elect him to the throne of that kingdom: but the pestilence that followed, obliged this monarch to abandon his conquests. — Hence, however, it is clearly seen what we are to understand by the term White Russia.

The russian empire received a fresh augmentation at the treaty of peace concluded with the porte the 29th of December 1791; that is to say, the whole of the territory of Ochakof on the Bogue, as far 'as the Dniestr, which last-mentioned river is now settled to be the boundary for ever*.

The

* In addition to what has already been said of the extent of the empire, we will just give two calculations as made by professor Kraft of the academy of sciences. By some experiments in regard to the table for zones, where the flattening of the spheroid amounts to $\frac{1}{280}$, he found that the whole empire, whose northern latitude he admits to be $42^{\circ} 31'$ to $78^{\circ} 30'$ including the inland seas†, but exclusive of all the bays and gulfs, to be in the frigid zone 67,157

† Consequently he gives the empire a greater northern extent than we thought ourselves authorized to do.

The empire has hitherto been considered as lying in but two quarters of the globe, namely Europe and Asia; future geographers may perhaps have to describe its dominions in a third, the continent of America, for the territory there, though probably at present but insignificant, may easily be extended and increased. Indeed from the forementioned russian establishment on the firm land of America, and the islands already made tributary there, the empire might even now with propriety be said to extend into that quarter of the globe.

Russia, by its magnitude and situation, has very various frontiers as well as neighbours.

geographical square miles, (15 to a degree of the equator,) and in the temperate 263,349; together $\frac{1}{4}$ of the northern hemisphere, or 330,506 square geographical miles. By this calculation all the general maps of the russian empire then in being were proved to be wrong; and indeed the accuracy of all that have since appeared, at least in regard to several regions, may be very much questioned. If we add to this, that since the year 1783 Russia has greatly enlarged its territory, at the same time that the islands of the eastern ocean, between Asia and America, in so far as they are actually tributary to Russia and consequently belong to the empire, cannot be accurately laid down and brought into the account, which yet properly should be done; it will then appear that none of the statements hitherto made are to be considered as complete.

On two sides, namely, to the north and the east, if we omit the establishment on the continent of America, it is surrounded by seas. On the other sides it is bounded partly by terra firma, partly by seas, and here and there by rivers, namely, to the west by Denmark, by Sweden, and by the Baltic; but to the south, by Courland, Poland, Turkey, the Euxine and the Caspian, by Persia, China, and various tribes of almost savage, nomadic, or, in one word, unpolished nations. Some of these borders are capable of enlargement, especially in the numerous islands of the eastern ocean, which might easily be made tributary, as no other foreign power can lay any well-founded claim to them; again in the north on the firm land of America; and among the independent hordes of Asia, who, besides, on account of their turbulence sometimes deserve a little correction. — Other frontiers are fixed by treaty, viz.

1. With Denmark, concerning Lapland or Finnmark, in the year 1602.

2. With China and the Mongoles, in 1727. By the carelessness of a Russian minister, who acted too imprudently for the cunning Chinese, the limits were drawn to the disadvantage of Russia.

3. With

3. With Persia by the treaty of 1732. At present the river Terek is regarded in some respects as the line of limitation.

4. With Poland, by various treaties in 1667, 1672, 1717, 1721, 1773, 1776, 1781, 1793, which however were not finally adjusted till 1795.

5. With Sweden, by the treaties of 1721 and 1743. However, the borders are not yet accurately settled; for several islands in the river Kymmene, and numbers of bordering boors, belong neither to one nor the other of these powers, and therefore the latter live very comfortably in their own way, exempt from all tribute and burdens of every kind.

6. With the Turks, the antient treaties were explained and amended by new ones in the year 1739, and still more in 1774 and 1786; and which we may probably expect to be done again, now that the two empires are come to a proper understanding.

7. With Courland the last settlement was made in 1783, till the final surrender of their independence in 1796.

— This diversity of boundaries and neighbours, requires very diverse means of security and occasional defence. These must consist either in strong places, or a great force by sea and land, but both on different footings, in regard to the
territory

territory and to the nation against which they are to be employed. In some parts large ships of the line can only ensure safety ; in others moderate sized vessels, or even little armed boats, may produce the proper effect. Against some neighbours, strong forts on the frontiers are kept up ; against others a wretched wooden wall, or stakes drove into the ground, with two or three iron cannon, and a garrison from 80 to 200 men, completely answer their purpose. Against the attacks and robberies of uncivilised nations, lines are formed with petty forts or ramparts : some of these are provided with bastions of earth ; others, properly speaking, have no fortrefs, but consist merely of casernes and stables, built in a quadrangular form, with a watch-tower at two corners *. Where security requires it, other forms of defence are used. Thus the village Raslomagefskaja on the Tobol, between the borders of Orenburg and Siberia, is excluded from all access by a strong hedge, in some places strengthened, for a considerable length, by chevaux de frize ; but the village Nishno-Tschernafskoi has a fortified wooden church †. Some parts require no defence whatever ; for example, the coasts of the frozen ocean ; and the desert

* Pallas's travels, vol. ii.

† Id. *ibid.* p. 406, 408, 409.

part of the mongolian borders, from the Ob to the Yenisei, is entirely unfortified and open. — In some places a river forms the boundary; as the Kymmene, before mentioned; in like manner, the Argoun towards China; and not unfrequently a vast steppe, when the limits are not precisely drawn with the nomadic and uncivilised neighbours.

From Tchutckaia zemlia, northwards over Kamtshatka, the empire borders pretty nearly on America; being, by the latest observations, only separated from it by a strait of the sea, no more than 175 english miles in breadth; namely, Bering's straits, which Busching every where calls Cook's straits. The Tchuktchi have not as yet been subjected; probably because it has not been thought worth while to fit out a military expedition for that purpose; nevertheless that people acknowledge the russian sovereignty. They have actually for a long time carried on traffic with the Americans that dwell over-against them, make use of the same canoes with them, though they differ greatly from them both in language and dress. Beyond that cape, towards America, lie several isles, two of which are uninhabited. The main land of America there (if in fact it be not a very large island) may be seen from this promontory; and another american island

is at about the distance of 210 english miles from the possessions of Russia.

We come now to speak of the uncivilized nations that either belong to the empire, or are just without its borders. The latter are by no means dangerous neighbours, but are easily kept in awe; or, if they make an attack, are presently frightened back again. Against them the former are made use of as a defence. Indeed, it was formerly a hard matter to restrain them within bounds, but we have seen under the late reign what good regulations, without violent measures, will effect.

Those that belong to the empire may indeed cause some alarms lest a swarm of them should get over the borders, as did actually once happen some years ago; but means are used for the prevention of this: it is found, however, that such people are most easily managed and kept to their antient habitations by gentle treatment. Their own chiefs and khans receive titles, dignities, and presents; and able officers are kept among them as spies upon their conduct. Should they happily, by example and encouragement, habituate themselves to a better form of government, it would then be just the same thing as if an entire nation had been added to the empire. Many of them have already addicted themselves

to agriculture, and other useful employments, much more than formerly. — Even the borderers, by the wise methods pursued by the russian commanders, are become more serviceable to the empire, especially in matters of commerce.

The boundaries in general are so disposed, that an attack from regular foes is only possible on a few sides : and against these, sufficient means of defence are at all times practicable. A few regular enemies can never be of much consequence, as Russia always keeps on foot a respectable and well-disciplined army. Besides, the great possessions adhering together are so defended by the present constitutions of most of the neighbouring states, that Russia has never any need to fear an attack in the heart of the empire, though in former times a foreign enemy may have found it possible to penetrate so far.

It is scarcely necessary to shew that the empire, from the very nature of it, is capable of progressively growing to a greater, even to an astonishing magnitude, without attempting new conquests. It has already been attaining gradually to a high degree of power, particularly in modern times. Yet we are not to imagine (as some people not well-versed in history are apt to do) that it was formerly a country absolutely insignificant, or even quite unknown. In

very remote periods, long before Kasan, Astrakhan, Siberia, &c. were conquered, Russia was remarkable both for its power and its magnitude. How often did it not then strike terror into the haughty sovereigns of Constantinople, even while surrounded with the magnificence of imperial Greece? Moreover, the Poles, the Swedes, the Hungarians, even the far distant French, had kiovian princesses on their thrones. — Internal divisions among brethren of the reigning family afterwards, indeed, weakened the empire, insomuch that it was deluged by a powerful foreign nation. But by its own inherent vigour, without the aid of external succours, it shook off the odious yoke, made extensive conquests, and evinced to the world what it was able to perform by its own power alone. Thus it rapidly grew into one of the greatest monarchies the universe had ever beheld. The colossus only wanted a skilful hand to shape it into form: and this it first found in Peter the great, and afterwards in Catharine the second. — True, it was the happiness of that emperor, that the imprudence, or rather the temerity, of Charles XII. contributed much to the rapidity of its advancement; yet the consequences would have been less striking and brilliant, if the internal strength and greatness of the empire had not

so signally concurred. Under the empress Anna, Russia, with all her splendid victories, and combined with Austria, found enough to do to put an honourable end to the turkish war : an evident token, that a proper use was not made of the peculiar greatness and the important resources of the country. Of all the powers confederated against the king of Prussia in the seven years war, the power of Elizabeth pressed hardest upon him : the consequences were not adequate to the expence, owing to the events and combinations that happened afterwards ; however, the strength of Russia was not then entirely manifest. It was displayed during the war with the Turks in 1772, to so high a degree, as to raise the admiration of the world. Though the empress at that time maintained a body of troops in Poland, yet she stifled at once an intestine commotion ; and without foreign aid, by her own forces, gained repeated victories over the Turks, conquered provinces and fortresses, appeared with fleets that spread terror through regions to which the Russians were scarcely known by name, annihilated the formidable navy of her enemy, surrounded the whole numerous army of the Turks, performed wonders, and concluded a glorious peace. And what great achievements were not done in the last turkish war !—Russia,

if her forces be properly employed, without the aid of foreign alliance, is fully able to resist the attacks of any invader. Extensive possessions, a brave people, excellent products, and considerable revenues, render it in all respects truly great ; as will more plainly appear in the following sections,

SECTION II.

Climate, and quality of the soil.

FROM the enormous extent of the russian empire, and its situation in the equatorial and meridional degrees before-mentioned, it will naturally be inferred that the temperatures of the atmosphere must be various. It contains many regions that are blessed with the purest air, and the mildest sky ; but a greater number of others where the weather is extremely rude and cold, and many others again where the exhalations from the earth are not the most wholesome. The parts lying towards the south enjoy a warm and agreeable temperature, in which almost all the plants and vegetables of countries situated much nearer to the equator flourish and abound. Thus, in the region of Tzaritzin, even those of China, which most delight in warmth,

thrive to perfection in the open air, and produce their seeds in full maturity. Yet it knows nothing of such burning sands as are found in the sultry climes of Africa. Others again, in high northern latitudes, though not congealed in everlasting ice, are yet oppressed with so severe a frost as to exclude the arts of agriculture. On the whole, therefore, the climate is not excessively hot, except at certain seasons in Taurida, seldomer and less lasting in a few other places ; but in many regions it is extremely cold. However, the one tract of country not only supplies the deficiencies of the other ; but nature has kindly provided that every climate should be fitted to the wants of its inhabitants, and has adapted them to the temperature of their sky. High to the north she has dispensed no corn, but plenty of moss, for the animals ; and for mankind an infinite variety of berries, of fish, and wild fruits. Farther to the south her liberality is displayed : beneath a mild and genial atmosphere she bestows on the inhabitants a superfluity of the finest products.

“ The remark, that places lying in the same degree of north latitude, or having the same polar elevation, do not exhibit the same temperature of climate, but that as we advance toward the east the cold is always more intense,
is

is also corroborated by observation in the russian empire. The cause adduced by some respectable writers, that the eastern regions of Europe and Asia lie more remote from seas, than the western, by no means solves the difficulty; since many of them lie near enough to the sea, nearer than the western, nay some of them are even surrounded by seas, and yet are very cold: — on this head I need only mention Kamtschatka. — M. Pallas,* seems to have come nearer the truth of the matter, by accounting for this phænomenon from the influence of mountains; yet even this hypothesis is not entirely free from obscurity and doubt.

In the middle and northern regions the winters are very cold, and the days uncommonly short; but the summers are so much the longer, and the heats are sometimes great. That the cold, however, attacks the brain, as Busching pretends, is a mistaken notion. In many of these parts the girls go always bare-headed, and the women wear only thin linen caps; and yet they neither feel headachs nor become brainsick by the practice. Only such as, having been accustomed to a warmer country, come to live in a colder, feel the cold, especially at first, very severe; yet,

In his travels, vol. iii. p. 272.

neither by it, nor (as he elsewhere maintains) by the brandy they have drunk in their youth, do people grow mad. The provinces on the shores of the Baltic are sufficient of themselves to refute this opinion. In severe frosts it is no unusual thing for men to be frozen, so as either to die on the spot, or, without speedy assistance, for the limbs that are frozen to fall off by degrees: but never any one became mad by it. The wives of the livonian boors even frequently give little portions of brandy, a favourite liquor with them, to their children at the breast, as well as to those of larger growth; yet fewer crazy and mad people are found here than in numberless other countries. — Whether the cold (likewise according to the assertion of Mr. Busching) be the occasion of certain endemial diseases, must be left undecided. It may perhaps have been observed in some districts, but never authentically. People from different provinces, to whom we have put the question, knew nothing of endemial diseases that had arisen merely from cold. With delicate persons, especially of the higher classes, colds, defluxions, rheums, and coughs, are common enough, not merely during the cold of the winter, but also at other seasons of the year: the common people know but little of these complaints. These never feel any injury

jury from currents of air, which we call draughts; though persons of the former description frequently take cold even when they have not stirred out of their warm apartments. In sharp biting frosts, if people are but properly clad, and forbear to sit down, especially upon the banks of snow, which may often cost them their lives; they find themselves more healthy than in the moist weather of autumn, though such as live in the country are obliged to expose themselves the whole day long in the open air, to the utmost force of the cold, in forests, on hills and mountains, in the streets, &c. Any slight colds they may take, or any obstructions of the pores, are soon remedied by the hot rooms in which they are accustomed to sleep, and still more by the frequent use of their universally beloved hot-bath. — One sure proof that in general the climate is not prejudicial to health is the great number of persons that in all these parts attain to a very advanced old age*.

The

* From fourscore to ninety is an age by no means thought extraordinary; but numbers continue advancing from that period. Among other instances that we could adduce from various quarters, we shall select one, of a man still living, of the name of Michaila Leonof, Natshafka, who was formerly a burgher at Velitsh, and now keeps a krug, or public inn, in the village Belcika, near the old-

russian

The freezing of the rivers happens too in various ways, according to the degree of cold, the quality of the water, the current, and the nature of the bed *. Some carry floating ice, which at length consolidates ; others, on a sudden frost, are covered at top with icy particles like gruel, which in a day or two congeals ; others again, of a gentle current, are in one night covered with a thin scum of ice which gradually increases in substance ; while the rivers in russian Dauria, or the province of Nertshinsk, differ from all these,

russian borders, and in the government of Smolensk. So early as the year 1664, being then a well-grown boy, he was sent by his parents to search among the slain for the body of a relation who had fallen in the battle fought that year between the Russians and the Poles. This old man is still in the full enjoyment of his senses, converses intelligibly, and walks with his staff daily two or three versts on foot, for the sake of exercise. — This remark was made in 1792.

* In and about Mosco the rivers freeze about the middle or latter end of November, and break up in March or the beginning of April. The birch-trees come out in May, and shed their leaves in September. — About Kursk all sorts of fruit are ripe in August, and the corn is then all got in. Suyef's travels.

• In Irkutsk the thermometer, on the 9th of December 1772, stood at 254 degrees ; notwithstanding that the Angara there commonly freezes not till towards the end of December, and frequently not till the middle of January ; and breaks up at the end of March, or in the former half of April. Georgi's travels, i. 36.

and

and exhibit a quite different property : for there the ice first forms at the bottom ; which is then lifted up by the water, where it remains till the whole river is entirely frozen up ; and at times so much ice comes gradually in addition to it, that the water can scarcely find a free passage beneath it. Some derive the cause of this either from the quality of the beds of the rivers there, which universally consist of chalk-stone ; or from the frigidity of the soil, which all the summer through never thaws to a greater depth than two arshines.

The frost, and still more the quantity of snow in connection with it, is of infinite advantage to the empire, as by that means the land-carriage is inconceivably facilitated. Many provinces could neither procure the necessaries of life, nor turn their own products into money, were it not for the frost and snow. No sooner is the sledge-way formed, than all the country roads are covered with carriages. In several districts, masts, barks, firewood, &c. can only be fetched in the winter, especially from marshy forests. What immense quantities of flax, hemp, tobacco, deals, tallow, &c. are brought by sledge-way from the distant provinces of Russia to the ports of the Baltic ! One single winter so mild as to produce no snow, would in many regions put a total stop
to

to commerce, as well foreign as domestic. In the winter from November 1789 to March 1790, the weather being for the most part mild, and but little snow falling, several provinces suffered great injury. Much of their products could not be conveyed to the maritime towns. Great quantities of the provision brought for the supply of St. Petersburg was so spoilt that it was thrown away. In several towns, both inland and on the sea-coasts, there was a real scarcity of firing and other necessaries: wood that had been sold at from one to two rubles the fathom, was not now to be had for less than double that price. Numbers that were under contracts for the delivery of brandy were very badly off.—Moreover, there are regions where the greater part of the year may properly be called winter, others where the winter lasts but a few weeks; some where storms are very frequent, others where they are extremely rare: of the latter sort are the parts about the frozen ocean.

Busching remarks, that corn ripens in few places above the 60th degree of polar elevation. This however admits of some limitation: corn is indeed grown far higher than the 60th degree, though in those parts the husbandman runs great hazard of seeing his hopes entirely defeated by the frost of one single night, which sometimes happens

happens in July or August. For instance, this is frequently the case at Mefen, which lies in 65 deg. north lat. where barley is sown, which comes up finely, but seldom ripens. It grows to almost the usual height, and bears large ears; but does not come to maturity above once in 20 or 30 years: however, it is sown every year for the purpose of getting fodder for the cattle. Corn comes from Archangel.

From several phænomena mentioned in the travels of the academicians, one would be tempted to suppose, that even the north of Siberia must formerly have had a much milder climate, or have undergone a most stupendous revolution in nature. As a proof of this we may adduce the skeletons of elephants and other large animals found within the earth on the shores and rivers there. These bones and teeth have been described by that learned and ingenious traveller M. Pallas. A skeleton of this kind, which we have seen, was found, among others, several years since on the shore of the Irtysh, some fathoms deep in the earth, where the river has washed away part of its bank. In all these places they are known by the name of mammoth's bones. Great numbers of them have been sent to Petersburg, where they may be seen in the museum of the academy of sciences; but they
are

are not well put together. If these animals lived once where their bones are discovered, it is certain that these countries must formerly have had a very different climate. Did they go thither while alive? What inducement led them? Have they been wafted thither after death? What a flood must it have been that carried them! — Or, are they bones of sea-animals?

A general division of the whole empire may be made into three great regions, in regard to weather, and the consequent growth of the productions of nature, viz.

1. The region lying above the 60th deg. and extending to the 78th degree of north lat.
2. The region lying between the 50th and the 60th degree of north lat.; and,
3. The region which lies to the south of the 50th, and reaches to the 43d degree.

The first is the rudest and coldest. In it are contained the greater part of the governments of Irkutsk, Tobolsk, and Vologda; the entire governments of Archangel, Olonetz, and Viborg, with part of those of Perme, Novgorod, and St. Petersburg*. All these regions lie in a very cold

* By the observations of the academician Euler there are even at St. Petersburg only two months in which it never snows. — In order to characterise the weather of the northern

cold climate, having a winter extremely severe, especially Siberia.

The

northern region we will give a short extract from the meteorological remarks published by M. Fries, of the territorial town of Ustiug Veliki in the government of Vologda. This town lies in $60^{\circ} 50'$ north latitude, and $62^{\circ} 10'$ east longitude from Ferro, 516 miles from the nearest shore of the frozen ocean, and 1002 miles from St. Petersburg. The mean heat and cold here is : above Reaumur's freezing-point in the month of April — till September ; below the freezing-point in the month of October — till March. The mercury in Reaumur's thermometer, in the single month of June alone, falls never below 0, and only in January never rises above 0. The cold increased at times so late as in the middle of April to 30 degrees, and the quicksilver may, sometimes so early as November, and again in the first days of March, be hammered. In every winter are 120 days, in which the cold is more than 5 degrees ; and, of them, 65 days in which it exceeds 10 degrees ; yet the summer has more hot, than the winter has cold days. The thermometer stood, upon an average of several years, the whole day above 0 on 152 days, and below 0 on 150 ; consequently there were 63 days on which it stood alternately above and below 0. The rivers are navigable about the 10th of May. At the end of that month the summer-corn is sown, and about the middle of June the fields are manured for winter-sowing ; the harvest is commonly in August. The trees shed their leaves sometimes so early as the 10th of August ; but usually about the 20th. •

Ustiug Veliki lies $15\frac{1}{2}$ degrees more to the north than St. Petersburg, the quicksilver froze in open air the

4th

The second region, in regard of its fertility, may be called the temperate; in one half whereof, that is, from the 55th to the 60th degree, the weather, though pretty severe and cold, yet allows the fruits of the field and the orchard to grow. In the other half, namely from the 50th to the 55th degree, the climate is much milder still, affording, beside the usual products, others which do not succeed in the former. The whole of this large, beautiful and important region comprehends the governments of St. Petersburg, Reval, Riga, Polotzk, Mohilef, Smolensk, Pscove, Novgorod, Tver, Yaroslaf, Kostroma, Viætka, Permia, Kolhyvane, a good portion of Irkutsk and Ufa, the governments of Mosco, Vladimír, Nishney-Novgorod, Kazan, Kaluga,

4th of November 1786, during a cold of $30\frac{1}{2}$ degrees of Reaumur's thermometer; the 1st of December at 40 degrees, it fell the same day to 51, and the 7th of December even down to 60. The quicksilver then froze to a solid mass, so as to bear beating with a hammer, in a warm room, several times before any pieces flew off from it. See the observations of M. Fries, in Crell's annals, 1787, part x. p. 318, & seq. — At Krasnoyarsk the quicksilver froze at 235 and 254 deg. of de l'Isle's scale. Pallas, tom. iii. p. 419. — In Solykamsk, in 1761 it fell in the said thermometer of de l'Isle quite down to 280 deg. Examen du voyage de M. de la Chappe d'Auteroche, p. 105.

Tula,

Tula, Riazan, Voronetch, Tambof, Penfa, Simbirk, Kursk, Orel, Novgorod-Sieversk, Tschernigof, and the greater part of Kief, Kharkof, and Saratof.

The third is the hot climate, yielding products, e. g. wine and silk, which the two former do not. In this lie Taurida, Ekatarinoslaf, the major part of Caucasia, and a part of Kief, Kharkof, Voronetch, Saratof, Kolhyvane, and Irkutsk.

In Astrakhan the heat is sometimes so intense that the mercury in Fahrenheit's thermometer is up at $103\frac{1}{2}$, and rain is then so rare, that without artificial irrigation all the plants are withered. — Among the finest and most fertile tracts of the southern districts are the caucasian territory of the government of Caucasus and the mountainous part of the province of Taurida. The region about the Terek and the foot of the caucasian mountains bear the best wheat, the choicest orchard-fruits, wild and cultivated vine-stocks, mulberry-trees, wild olives, figs, chestnuts, almond and peach trees, saffron, &c. — Of the mountainous part of the province of Taurida, M. Pallas, in a late publication, gives so animated and delightful a picture that I cannot resist the temptation to insert a translation of it here, especially as it is not at all known in England.

“ One of the mildest and most fertile regions
“ of the empire is the beautiful semicircular and
“ amphitheatral vale formed by the tauridan
“ mountains on their side along the shores of
“ the Euxine. These vallies which are blessed
“ with the climate of Anatolia and the lesser
“ Asia, where the winter is scarcely sensible,
“ where the primroses and spring-saffron bloom
“ in February and often in January, and where
“ the oak frequently retains its foliage the whole
“ winter through, are, in regard to botany and
“ rural œconomy, the noblest tract in Taurida
“ and perhaps in the whole extent of the empire.
“ Here every where thrive and flourish in open
“ air the ever-verdant laurel, the oil-tree, the
“ fig, the lotus, the pomegranate, and the
“ celtis, which perhaps are the remains of gre-
“ cian cultivation ; with the manna-bearing ash,
“ the turpentine-tree, the tan-bark-tree, the
“ strawberry-tree from Asia minor, and many
“ others. This last particularly covers the
“ steepest cliffs of the shore, and beautifies them
“ in winter by its perpetual foliage and the red
“ rind of its thick stem. In these happy vales
“ the forests consist of fruit-trees of every kind,
“ or rather the forest is only a large orchard left
“ entirely to itself. On the shores of the sea
“ the caper-bushes propagate themselves sponta-
“ neously;

“ neously ; without the assistance of art the
“ wild or planted vine-stems climb the loftiest
“ trees, and, twining with flowery creepers,
“ form festoons and hedges. The contrast of
“ the orchards and the rich verdure with the
“ beautiful wildness which the adjacent moun-
“ tains and rocks present, which in some places
“ rise among the clouds, and in others are
“ fallen in ruins ; the natural fountains and cas-
“ cades that agreeably present their rushing
“ waters ; lastly, the near view of the sea,
“ where the sight is lost in the unbounded
“ prospect : all these beauties together form so
“ picturesque and delightful a whole, that even
“ the enraptured muse of the poet or the painter
“ would be unable to conceive any thing more
“ charming. The simple manner of life of the
“ good-humoured highland Tartars who inhabit
“ these paradisaical vales ; their turf-covered
“ cottages, some hewn in the rock on the
“ mountain’s side, others placed amidst the
“ luxuriant foliage of the surrounding orchards ;
“ the roving flocks of goats and sheep clinging
“ to the declivities of the solitary rock ; the
“ sound of the pastoral flute, re-echoing its
“ plaintive tones among the hills — every thing
“ here renews the image of the golden age, its

“innocence and simplicity; every thing con-
 “tributes to cherish the propensity to an artless,
 “retired, and rural life, and we for a second
 “time gain a fondness for the abode of mortals,
 “which the horrors of war, the fordid pursuit
 “of wealth in great cities, and the luxury
 “which fills the train of all the social vices,
 “render so soon intolerable to the sincere vota-
 “ries of wisdom *.

“In these enchanting vallies, to the benefit
 “of the empire, which no where, in its whole
 “extent, possesses so fine a climate, might the
 “useful products of Asia minor, and of the
 “southern parts of Europe, be made indige-
 “nous. The superior kinds of fruits may be
 “produced here without trouble, and are for
 “the most part so already. The best kinds of
 “olive and fig-trees may be cultivated here;

* To the generality of readers it may not be a matter of
 indifference to learn that the philosopher from whose pen
 this passage proceeds, resides at present, according to his
 wish, in the country the beauties whereof he here paints in
 such warm and poetical colours. As the health of this fa-
 mous naturalist rendered his living in a warm climate neces-
 sary, on his request to the late empress he obtained not only
 immediate permission to choose for himself a place in her do-
 minions, but also, on his pitching upon Taurida for that
 purpose, an estate in that province, and to the forming of
 his establishment a present of ten thousand rubles.

“and

“ and even the fefamum plant never decays.
 “ Orange, lemon, and citron trees, and parti-
 “ cularly the cedrat, the most excellent species
 “ of them, would bear the winter extremely
 “ well with a little care. The vine would be
 “ constantly improving, if but a judicious se-
 “ lection were made of the stems for planting,
 “ if greater attention were paid to the various
 “ effects of the soil and situation of the vine-
 “ yards, and if more care were had in working
 “ the must and keeping the wine. For the use of
 “ the apothecaries and manufacturers a number
 “ of excellent remedies and dyes might be pro-
 “ duced, which are at present brought from the
 “ isles of the Archipelago, from Greece, from
 “ Asia minor, and Persia; several of them are
 “ now seen there growing wild. Likewise many
 “ hard and useful kinds of wood, especially
 “ coloured, fit for inlaid work, might here be
 “ propagated: perhaps in some tracts even the
 “ sugar-cane would thrive,

“ On the whole, the botanical riches of the
 “ mountainous part of the peninsula of Taurida
 “ are so great and remarkable, that the num-
 “ ber of those plants alone, which are no
 “ where else to be found in the russian empire,
 “ amounts to several hundreds, among which

“ is a considerable variety of species entirely
“ new*.”

But Mr. Hermann says, if we would divide the empire more accurately by its climates, it falls properly into four regions, each of which contains the governments as follows :

The VERY COLD region, from 60 to 78 deg. N. lat.] Vyborg, Olonetz, Archangel, the greater part of Irkutsk, Tobolsk, and Vologda, and a part of Perme, Novgorod, and St. Petersburg.

The COLD region, from 55 to 60 deg. N. lat.] Reval, Riga, Polotsk, Pskove, Tver, Mosko, Yaroslaf, Vladimir, Kostroma, Viätka, the greater part of Perme and Kazane, and a part of Irkutsk, Kolhyvane, Ufa, Sinbirsck, Nishney-Novgorod, Kaluga, and Smolensk.

The MODERATE region, from 50 to 55 deg. N. lat.] Moghilef, Tchernigof, Orel, Kursk, Toola, Tambof, Penza, the greater part of Kief, Kharkof, Voroneth, Riazane, Saratof, Kaluga, Sinbirsck, Ufa, Kolhyvane, and a part of Irkutsk, Kazane, Nishney-Novgorod, and Smolensk.

* Physical and topographical picture of Taurida, extracted from the journal of a journey made in 1794, by P. S. Pallas, p. 33—36.

The HOT region, from 43 to 50 deg. N. lat.] Tavrida*, Ekatarinoslaf, the greater part of Caucasia, and a part of Kief, Kharkof, Voronetz, Saratof, Ufa, Kolhyvane, and Irkutsk.

These four so very different regions in regard of weather, we must bear constantly in mind, in

* Tavrida has a very agreeable climate. For almost nine months in the year the inhabitants enjoy fine and warm weather, and Nature here requires scarcely three months for recruiting her vigour. The spring usually begins with March; and commonly the greatest heat is from the middle of May to the middle of August. This is generally so violent, that it would be very dangerous but for the wind that blows regularly every day from ten in the morning till six in the evening, which make it very supportable. Thunder, accompanied by heavy showers of rain, is here also not unfrequent, whereby the air is seasonably cooled. September and October are generally the finest months. The autumnal weather here first appears about the middle of November. The frost comes in December and January; but it is very moderate, and seldom lasts above two or three days. However, it is to be remarked, that the flat part of this country differs from the mountainous in this, that heat and cold are commonly greater in the former, and rain and snow more rare. In general through all the districts of Tavrida, a few places upon the Sibash excepted, the air is reputed to be very healthy. — About Kursk, in the Ukraine, all kinds of fruit, arboufes, melons, and apples, are ripe in August, and the corn is by that time already cut, and got in. The rivers freeze towards the close of November and in December, and in March are again free from ice. Suyef's travels.

speaking of the climate of the russian empire. Hence we see that there are governments, which have the climates of two; others, as Kolhyvane, of three; and the government of Irkutsk even of all the four regions. Whatever Nature produces under these meridians, Russia either has or may possess; it may boast of advantages to which no other single empire or country of Europe can pretend.

These regions being so diverse, various also must be their weather, the alternation of seasons, and other phenomena of the atmosphere. While, in one region, the warm and genial breezes of the spring are coming on, in others the severity of winter still prevails; and there are mountains, in the long chains of Ural, and yet more in those of Altai and Sayane, which are never free from ice and snow. So likewise there are several promontories, in the frozen ocean, whence, as far as the eye can reach, the water is covered with ice even in the height of summer, and rivers which are scarcely free from it for two or three months in the year. It may in general be affirmed, that in many districts of the FIRST region there is hardly any summer; for the three or four months in which it does not snow in some districts scarcely deserve that name. However, it is an observation, confirmed by
repeated

repeated experience, that the farther a district lies towards the east, so much is their weather proportionably colder. The fruits, for example, that come to maturity beneath and above the 60th degree N. lat. in and round St. Petersburg, and in the government of Vyborg, are not produced under the same latitude in Siberia. Probably the proximity of the mountains, and the cold north winds blowing from the frozen ocean, are partly the cause of this difference, to the disadvantage of the latter. In many of the northernmost morasses the ice does not dissolve to above the thickness of a quarter of an arshine. — Even the weather of St. Petersburg, by reason of its situation so far to the north, is rude enough, and, from its vicinity to the sea, unfettled and unfriendly. The cold during the winter months is here very intense.

A high northern situation, in a low plain covered with swamps and woods, intersected by a number of large rivers, renders the climate cold, rude, and, in some circumstances, singular. The imperial academy of sciences, from its first establishment in 1725, has kept regular observations of the weather; and the freezing of the Neva has been annually noticed from 1718, together with the day on which the ice broke up. By these observations it appears that it happens
upon

upon an average of one year with another on the 14th of November.

The spring has in general much frost, snow, and rain. The month of March, old style, which must be all along understood, as it is the style of the country, is always a winter month, with bright days. According to the average of the observations made by the academy during ten years, March has 10 bright, 8 cloudy days, 2 days of rain, and 11 of snow.

April, during the same period of ten years, has upon an average annually 11 bright, 8 cloudy, 4 snowy, and 7 rainy days. In this month the swallows appear, the buds of the trees open, and the vernal flowers are seen. — Most commonly the ice of the Neva breaks up in April.

May, upon an average of ten years, has 13 bright, 5 cloudy, and 13 rainy days: neither is it entirely without snow. It is not unusual for the last half of this month to be raw and boisterous, whereby vegetation is much checked, and the summer shortened. But, as it often has days of very severe cold, so, on the other hand, as in the years 1729, 1749, 1759, 1766, and 1767, the hottest days were in the month of May.

The summer is mostly fair and fine. Its longest day is 18 hours and an half; and in the evening
twilights,

twilights, which are uncommonly luminous, it is easy to read or write. In general the very sultry days are but few; and these are amply compensated by the cool evenings, nights, and mornings. Some summers, however, are very wet and cold: and, in the country, now and then, they experience nightly frosts.

According to the ten years average taken by Mr. Kraft, the month of June, the 9 first days whereof belong to the spring, has 9 bright, 8 cloudy, and 13 rainy days.

July, 13 bright, 4 cloudy, and 14 rainy days. The corn harvest usually begins about the 25th of July.

August has 8 bright, 7 cloudy, and 16 rainy days.

The autumn has rarely many bright days, but is mostly cloudy, wet, and boisterous. Such a fine autumn as that of the year 1789, and in general such a fine year throughout, very seldom happens.

On an average of ten years, the month of September, the 9 first days whereof belong to the summer, has only 5 bright, 8 cloudy, and 16 rainy days; on one day there was even a fall of snow.

October has 4 bright, 9 cloudy, 13 rainy and snowy days,

November

November is commonly wintry weather throughout. According to the calculation of professor Kraft, on an average of ten years, it has annually 5 bright, 10 cloudy, 4 rainy, and 11 snowy days. In November the Neva is usually covered with ice.

The winter is always severe; and, as the atmosphere is for the most part dry, even in snowy weather, it is so far advantageous to health, that the fewest sicknesses and deaths of all the year are observed to happen in this season. Indeed, so far from being unwholesome, this dry cold, if not so extreme as to be oppressive, gives life and spirits both to man and beast. Its shortest day is only five hours and a half; and, if about this time the days be cloudy, though a great light proceeds from the snow, yet it is but for a short time that candles can be dispensed with. Not only the Neva, but also the vast Ladoga lake, the Peipus, the Cronstadt gulf, and generally even the gulf of Finland, as far down as the islands, are every year covered with ice three quarters of an english yard in thickness.

According to the foregoing remarks of the academician Kraft, on an average of ten years, December, the 9 first days whereof are to be reckoned to the autumn, has only 3 bright, 9 cloudy, 16 snowy, and 3 rainy days.

January has 8 bright, 11 cloudy, 11 snowy, and 2 rainy days.

February has 8 bright, 6 cloudy, 12 snowy, and 2 rainy days.

By this average then the inhabitants of St. Petersburg have annually 97 bright days.

In like manner, the result of the accurate observations for ten years on the quantity of rain and snow falling at St. Petersburg, was found to be, that the mean annual duration of rainy and snowy weather is 42 times 24 hours, or somewhat less than the ninth part of the year. From a ten years' observation it was seen that it rains for 103 days, and snows for 72; and that, if we divide the year into twelve equal parts, one fourth part is fair weather, one third rainy weather, and one fifth part snowy weather. The whole quantity of rain and snow water taken together which fell within one half-year, is observed to be in the following proportions:

January -	0,979	July - - -	2,760
February -	0,979	August -	2,671
March -	0,801	September	3,473
April - -	1,246	October -	2,493
May - -	1,335	November -	1,513
June - -	3,116	December -	0,079

Total, 22,345 english inches.

The height of the annually falling rain and melted snows, dew, hoar-frost, (not reckoning the moisture of cloudy days and hail,) rose during

during somewhat more than twenty years in which it was observed by the academy, annually from $12\frac{1}{4}$ to $26\frac{1}{4}$ Paris inches; that is, so high would the surface of the earth have been covered with the falling water, if it had remained where it fell, undiminished by evaporation and the imbibing of the earth. According to another observation of Mr. Kraft, the mean number for one year amounts to $20\frac{1}{2}$ inches. The snow-water scarcely forms the third part of this quantity. In London the height of the yearly falling water, upon an average, is $18\frac{1}{2}$ inches, in Paris 17 inches, in Berlin $19\frac{1}{2}$ inches, at Abo in Finland $23\frac{1}{4}$ inches. The same learned and industrious academician has also calculated the height of the falling atmospheric water in every month, upon an average of several years.

	Inches.	Lines.		Inches.	Lines.
January	- 0	11	July	- 2	7
February	- 0	11	August	- 2	6
March	- 0	9	September	3	3
April	- 1	2	October	- 2	4
May	- - 1	3	November	1	5
June	- - 1	11	December	0	11

September is therefore the wettest, as March is the driest month.

The cold and its effects are here very remarkable. There are annually from 150 to 190 days of frost, the severity and continuance of which freeze the ground every winter from two to two and

and a half, and sometimes even three feet deep. The ice of the Neva is from twenty-four to thirty-six, but generally twenty-eight inches thick. It is curious to observe, that, though this thickness of the ice is formed by the sheets of ice lying horizontally on one another, yet the huge blocks of it that are cut out for filling the ice-cellars, on being left exposed to the sun, fall to pieces in perpendicular spiculæ, each of the thickness of one's little finger. So likewise in the spring, by pressing on a walking-stick, while the ice is still of its primitive thickness, the stick will go through, because it pushes down one or more of these spiculæ from their connection with the rest.

The covering of the Neva with ice, and the breaking up of it, are remarkable phænomena. When the ice is setting-in, as it is called, small detached flakes of ice are seen floating down the current, which soon grow into large fields, and acquire so great a momentum, that the bridges must be hastily taken asunder, to prevent their being carried away by the ice, a disaster which has happened more than once. These large plains of ice continue for a day or two passing with the current, while the boats are seen rowing between them; till all at once the floating ice stops, either by the gulf being already closed be-

low, or the flakes of ice freezing together : when immediately foot-passengers, who have been waiting on the shores for this happy moment, go over in all safety. Nothing is more common than to see boats crossing the river, and, in two hours afterwards, to behold hundreds of people going over on foot.

No less rapid is the departure of the ice. In the spring, the first indication of this approaching event, is the standing of the snow-water on the ice ; then the ice becomes more porous, or divides into spiculæ, lets the water through, and becomes of a blackish colour. At length it parts, while the roads that have been well trod during the winter still remain ; so that often foot-passengers are seen on these roads, and between them and the floating sheets of ice, boats in great numbers passing and repassing. By the force of the current, and shocks received from the floating ice, at length the roads give way ; the ice continues to fall down with the stream for a day or two to the gulf, and the whole river is clear. A week or a fortnight after this, the ice of the Ladoga comes down ; which, according as the wind may happen to be, continues a couple or more days, sometimes as many weeks, and renders the atmosphere uncommonly chill.

The ice and the cold are of service to the inhabitants in various ways. Distances are much shortened by their means, inasmuch as people, horses, and carriages of all sorts, and of ever so great burden, can cross the Neva, and the other rivers, lakes, and canals, in all places and directions: and the Cronstadt gulf supplies, in some measure, the want of navigation during the winter, by the transport of commodities of every denomination over the ice. As ice-cellars here are a necessary of life, for keeping provisions of all kinds during the summer, so every house in every quarter of the town is provided with one of them, to be filled with large blocks cut out of the river. This operation generally takes place about the beginning of February. The ice also promotes the pleasure of the inhabitants by giving them an opportunity for the diversion of sledge and horse-racing, and for that of the ice-hills so much admired by the populace, and of which I shall speak more at large hereafter. The weight of these ice-hills, together with that of a multitude sometimes of 5000 or 6000 persons standing about them on holidays, give the spectator a surprising idea of the strength and solidity of the ice.

What may be executed in ice was shewn by the Ice Palace which the empress Anna caused

to be built on the bank of the Neva in 1740. It was constructed of huge quadrats of ice hewn in the manner of free-stone. The edifice was 52 feet in length, 16 in breadth, and 20 in height. The walls were three feet thick. In the several apartments were tables, chairs, beds, and all kinds of household furniture of ice. In front of the palace, besides pyramids and statues, stood six cannons carrying balls of six pounds weight, and two mortars, of ice. From one of the former, as a trial, an iron ball with only a quarter of a pound of powder, was fired off. The ball went through a two-inch board at 60 paces from the mouth of the cannon; and the piece of ice artillery, with its lavette, remained uninjured by the explosion. The illumination of the ice palace at night had an astonishingly grand effect.

That the reader may be able to judge whether the climate here has become more severe or more mild, in a period of sixty years, or whether it has continued the same, I will subjoin the meteorological table from the works of the academy of sciences; but, for brevity's sake, take only from 5 to 5 years.

Years.

Years.	Reaumur's thermometer.		Rain and snow days.	Ice broke up, earliest and latest.	Standing of the ice, ear- liest and latest.
	Greatest heat.	Greatest cold.			
From 1726 to 1730 incl.	Not observed.		47	{ Mar. 27. Apr. 14.	
1731 to 1735.	Not observed.		35	{ Mar. 26. Apr. 24.	
1736 to 1740.		21 deg.	38	{ Mar. 25. Apr. 26.	Oct. 24. Nov. 14.
1741 to 1745.	21 deg.	22			
1746 to 1750.	27	22		{ Mar. 25. Apr. 25.	Oct. 23. Nov. 20.
1751 to 1755.	24	22		{ Mar. 26. Apr. 27.	Nov. 7. Nov. 20.
1756 to 1760.	22½	33		{ Mar. 27. Apr. 21.	Nov. 4. Nov. 19.
1761 to 1765.	22	27		{ Mar. 28. Apr. 23.	Nov. 8. Nov. 23.
1766 to 1770.	21	33	73	{ Apr. 1. Apr. 15.	Oct. 20. Dec. 1.
1771 to 1775.	21½	28½	166	{ Apr. 5. Apr. 19.	Oct. 31. Nov. 12.
1776 to 1780.	22	32	182	{ Mar. 31. Apr. 19.	Nov. 1. Nov. 21.
1781 to 1785.	22	30	85	{ Apr. 7. Apr. 22.	Nov. 6. Nov. 27.
1786.	23	23	185	Apr. 10.	Oct. 26.
1787.	25½	25½	215	Apr. 13.	Nov. 14.
1788.	26½	24½	183	Apr. 9.	Nov. 6.
1789.	24	25½	138	Apr. 19.	Nov. 14.

The height of the barometer during this time was never higher than $30\frac{9}{16}$, and never lower than $26\frac{9}{16}$ inches.

The Neva never broke up before the 25th of March, and never later than the 27th of April. The earliest standing of the ice was the 20th of October, and the latest the 1st of December. Its standing and breaking up determines our summer and winter.

On the breaking up of the ice, when the river is so far open as to be navigable for boats, the event is announced to the town by the firing of three cannons from the fortrefs. Upon this the surveyor of the city-wharfs goes in a barge with the city-flag flying, accompanied by a number of other barges, to the fortrefs, and salutes it with seven guns, on which the fortrefs returns the salute with five. From the fortrefs he then proceeds to the imperial winter-palace, where, on being come near the shore, he again makes another discharge of cannon, which is followed by three cheers from the crew, repeated by the companies of the numerous barges. This done, they all return in procession to the place from whence they came. Previous to this ceremony, no boat may dare to shew itself on the Neva; but from that moment any one may pass upon it that will: and so long as the Neva continues open, the rising and setting of the sun are noticed by a gun from

from the fortrefs. But this is discontinued during all the time that the Neva is covered with ice.

The fevere cold here has not that violent benumbing effect either on man or beaft as people in fouthern climates might imagine. This feems to be principally founded on the dry quality of the air during the froft, and perhaps in fome meafure may be owing to habit, by which both men and the inferior animals are hardened to the climate. However this be, from the drynefs of the atmofphere, foreigners, according to the univerfal testimony of them all, fuffer much lefs from the cold, than they do from lefs degrees of it in other countries. The drivers and their horfes, from being feafoned to the cold, feel little or no inconveniency in purfuing their employment through the ftreets of the town and along the roads, though the beards of the former and the muzzles of the latter are covered with hoar-froft and little icicles from the congelation of their breath; and in the fevereft colds they travel all day without receiving any detriment. Nay, even in from 20 to 24 degrees of Reaumur, women will ftand rincing the linen through holes in the ice, four, five, or fix hours together, often barefoot, with their hands dipping in the water all the while, and their draggled petticoats ftiff with ice.

The heavy gales of wind which prevail in these parts, and more especially in the gulf of Finland, have frequently occasioned much distress, by the swelling of the Neva, and the consequent calamitous inundation of the city. However, it is consoling to find, that from the repeated observations which have been made, these inundations are no longer so dreadful as formerly, because the overflowing of the river to about the height of six feet above its ordinary level, which formerly used to lay the whole town under water, does not any more produce that effect, except on the lowest quarters of it; a circumstance arising hence, among other causes, that, by the perpetual increase of buildings, the ground is become gradually higher. — The first inundation we know of happened in the year 1691, an account of which is given by Weber, the minister from the elector of Hanover, from the report of some fishermen who lived at Nienshantz, at that time a Swedish redoubt on the Neva. About this period, it is pretended, the water used to rise every five years. As soon as the inhabitants of the parts adjacent perceived the storm coming on with unusual vehemence, which, from sad experience, they knew to be the forerunner of one of these inundations, they immediately took their huts to pieces, tied the barks of them together in the form of a float, fastened them to the topmost branches

branches of the highest trees, and ran as fast as they could to the Duderhof-hills, fifteen versts from their place of abode, where they remained till the water had subsided. — From various observations made on this subject, the following conclusions have been drawn: the highest swells, namely, above six feet high, usually happened in the four last months of the year. Snow or rain have never had any remarkable effect upon them. The heaping of the ice at the mouth of the Neva often causes some floodings; but the principal causes of the overflowings of this river are the violent storms and winds from the south-west, or west, or north-west, which commonly are prevalent towards the autumnal equinox, and the elevation of the water is always in proportion with the violence and duration of these winds. In a word, the circumstances that mostly contribute to make the Neva overflow, are, if at the time of the autumnal equinox, three or four days before or after the full moon or new moon, when she is near her perigæum, a vehement north-west wind drives the water of the north sea during the flood and ebb into the Baltic, and at the same time with it or suddenly after it a south-west wind blows over the Baltic or the gulf of Finland. All these circumstances united, for example, at the great inundation in 1777.

It happened two days before the autumnal equinox, four before the full moon, two after its transit through the perigæum, and with a storm from the south-west, previous to which there had been strong west winds in the north sea, and vehement north winds at the mouth of the Baltic. — The most memorable of these floods, of which we have any account, were the following: in 1715, which, though the day is not noticed, yet went over almost all the bulwarks. In 1721, the 5th of November, exactly at the full of the moon. In 1723, some day of October, also at full moon, when the flood rose 3 inches higher than in 1721. In 1725, the 16th of November. In 1726, the 12th of November, the day after full moon, from 8 o'clock in the morning till mid-day, when the water rose to $3\frac{1}{2}$ arshines above its ordinary level, and one fourth and a half or eight decimal inches higher than in 1721. In 1727, the 21st of September. In 1728, the 3d of August and 3d of November. In 1729, the 3d and the 12th of October, the day after the new moon, about 10 o'clock in the morning, with a violent storm from the sea. In 1732, the 15th of September. In 1733, the 6th of September, the 8th and 31st of October, and the 12th of December. In 1735, the 26th of February; in the same year again in the night between

between the 9th and 10th of October, with a storm from the north-west which held the same course till noon, so that the overflowing water, by about 8 o'clock, had deluged every quarter of Petersburg to the height of an ell, and did not abate till afternoon. In 1740, the 12th of September, the day of the equinox, when the flood rose 2 arshines and 3 vershoks above the bed of the river. In 1752, the 22d of October, with a flying storm, from the south-west, verging to the west, which about 10 at night so raised the water, that it came nine feet and an half above its usual station, and inundated all the islands and the several quarters of the town (the Stickhof and the part about the Nesskoi monastery excepted) with tremendous violence, and causing great damage to the inhabitants; but presently after midnight it subsided with equal rapidity. At this flood it was very remarkable, that, on the 25th of October, with a strong gale from the S. S. W. the water, which had been pretty high in the nearest streets, swelled on the 26th with a south-west wind so as to overflow the whole city, yet, forasmuch as the violence of the storm turned in time to the north, overflowed by one arshine lower than the former day; and, lastly, that, on the 28th in the afternoon, after the stream had returned on the 27th to its ordinary

. channel,

channel, a new flood, almost without wind, succeeded, which did again much damage on the Vassilly ostrof, and probably was occasioned by storms at sea which had compressed the waters of the gulf of Finland. The last, and one of the most destructive inundations, was that in the autumn of the year 1777, and which in some respects exceeded all the foregoing, as it continued the whole night from the 9th to the 10th of September (therefore three days after the moon was at the full) with an uncommonly low state of the barometer; a violent south-west and afterwards westerly wind raging all the while, which forced the stream at 5 in the morning over its banks, and laid all Petersburg under water in many parts above two ells, but spent the most of its fury on the Vassilly ostrof and what is called the Petersburg-side, washing away fences, bridges, and such houses as were most exposed to the sea, forcing up whole acres of forest trees by the roots, transporting yachts, galliots, and heavy-loaded barks to a great distance on the land, and dashing others to pieces, and certainly would have raged with greater fury, and have committed far more havoc, had not the tempest; towards 8 o'clock, when the flood was risen to more than 10 feet above the common level of the river, and upwards of a foot and a half higher than in

1752, veered to the north-westward and caused the decline of the water, which about noon was well-nigh retired from the streets. Were the Baltic subject to a considerable flux and reflux, the inundations of Petersburg would be incomparably more terrible, and in all probability not much inferior to the remarkable spring-tide at Bristol, which often, in particular circumstances, increases to 50, or even to 60 feet. However, it is possible that storms prevailing in the north sea during the time of the spring-tides, which impel together an extraordinary quantity of water into the Baltic, may remotely contribute to the inundations that happen at St. Petersburg, when the winds that act to that end combine with these circumstances. — Less considerable floodings of the Neva are not unfrequent in autumn, rising to the height of from 5 to 7 feet, and have been remarked to happen ten times only since 1752; as, in 1756, the 29th of September, with a storm from the west, to 7 feet 3 inches english measure; in 1757, the 16th of October, with a storm from the south-west, to the height of 6 feet 2 inches; in 1762, the 28th of October, with a south-west wind, 5 feet 10 inches; in 1763, the 8th of October, with a south-west wind, 5 feet 4 inches; in 1764, from the 6th to the 24th of November, 7 feet 4 inches; in 1765, the 16th of November, in a perfect calm,

calm, 5 feet 6 inches ; in 1772, the 31st of December, with a south-west gale, 5 feet 2 inches.

The aurora borealis is very frequent, and not uncommonly makes its appearance with extremely vivid white coruscations of light. The year in general produces from 20 to 30 displays of those inexplicable phenomena : sometimes they reckon 40 ; but in 1762 there were only 2, and in 1731 4 exhibitions of the northern lights.

Storms of thunder and lightning are neither numerous, violent, nor lasting. In 1732 there were only 2 ; in 1750 but 3 ; though annually they may be computed at from 6 to 18. At times, however, they do considerable damage. Therefore the tower of Peter's church, which was deprived of its spire by lightning, the palaces of Gatchina and Peterhof are provided with conductors, the former on the principles of M. Alb. Euler, of our academy ; the two latter were placed under the directions of prof. Kohlreif.

No winds are particularly predominant here, though in one year this, and in another that, is most frequent. According to the observations kept since 1725, there are annually from 10 to 16 tempests. Of these the most injurious to navigation are those that come from the east, because they occasion the water of the Cronstadt gulf to be so low that no ships of burden can come up ; the western tempests, as before remarked,

marked, are more prejudicial to the city, by causing a swell of the Neva, and at times inundations.

Hoar-frosts are common, covering and ornamenting the leafless branches of the trees, in the winter months, with their extremely beautiful, sparkling, white, icy crystallizations. It but seldom hails; not above six times in the year — and the hail-stones are always small.

The sudden transitions of the air to different temperatures has often been mentioned as remarkable by travellers, with great justice. Thus, at Petersburg, on the 12th of February 1794, they had 13 degrees of frost; on the 13th, 2 degrees of thaw; the 14th, frost again; and on the 15th, 19 degrees of frost, by Reaumur's thermometer.

In the SECOND region the summer is indeed likewise in many parts short; yet in most of them so warm, and the days so long, that the fruits of the earth usually come to perfect maturity in a much shorter space of time than elsewhere. The winter too, in this region, particularly in the governments of Irkutsk, Tobolsk, Perme, Viætka, &c. for the most part very severe.

In the THIRD region, there are very extensive districts; for instance, in the governments of Irkutsk, Kolhyvane, and Ufa, where the winter is also long and cold. This, however, arises more

from the very lofty mountains with which these districts abound. But the governments in the european division of Russia that lie under this meridian, mostly enjoy a short and tolerably temperate winter, and a fine warm summer *.

In the FOURTH region the winter is short, and (though in some parts of the governments of Irkutsk and Kolhyvane, cold enough) the summer warm, often hot, and in many parts very dry †.

The

* In and about Mosko, e. gr. the rivers freeze over in the middle or towards the latter end of November, old style; and break up in March or the beginning of April. The buds of the birch-trees expand in May, and shed their leaves in September. — The river Ural usually flows, near Gurief, free from ice about the beginning of March.

† M. Falk writes as follows concerning the district circumjacent to the Terek: “ The spring is short and very
“ pleasant; the summer hot, with frequent rains and
“ storms; the autumn short and dry; the winter short,
“ clear, and rude.” And, of the parts about the Irtysh;
“ The climate of the lower region of the Irtysh, on account
“ of its eastern, and partly northern situation, is very
“ severe. The winter is continually keen. The summer,
“ for a great part of it has such a foggy atmosphere, that
“ one gets but a very small horizon, and I can frequently
“ look stedfastly at the dim orb of the sun with my naked
“ eye, as we do at the moon. The spring and the autumn
“ are mostly bright, but are subject to very rapid transitions
“ from pretty warm to biting cold. Falls of snow are not
“ rare in May and September; and, July only excepted,
“ no month in the year is secure from night-frosts. But,
“ in spring, here, as in the quite southern and middle
“ Siberia,

The immense territory of this empire likewise naturally forms itself into two grand divisions, by the vast Ural chain of mountains intersecting it from north to south; these divisions are very unequal, both as to dimensions and quality. That on the westward, is proper for European Russia; and that lying to the east, Asiatic Russia, or Siberia.

The air, in all the northern governments, or that lie somewhat high, is very salubrious. The same may be also affirmed in general of the second

“Siberia, every thing comes forward with amazing rapidity.” P. 258. — In Omsk, where the Om falls into the Irtysh, the cold, in 1770, was from 151 to 213 degrees of de l’Isle. In January 1771, the least cold 160, the greatest 200 deg. In February from 160 to 205. March the 12th it was at 190, and the 27th at 140 deg. The Irtysh here breaks up in March, usually between the 10th and the 20th. — In Kisliar, and about the whole of the Terek (the most southern districts of the Russian empire), the S.S.E. and S. winds, from the mountains, are very drying and cold. From 1768 to 1773 the greatest heat here, according to de l’Isle’s thermometer, was 97 deg. and the greatest cold 191 $\frac{1}{2}$ deg. On the 9th of November 1770, a small shock of an earthquake was felt there. Guldenstædt, part i. p. 177. — In Irkutsk, the 9th of December 1772, the thermometer stood at 254 deg. and the quicksilver consolidated in it. Georgi, travels, part i. p. 36.

The Angara there commonly does not freeze till towards the end of December; frequently not till the middle of January, and is already open again by about the close of March, or at farthest the first days in April.

and

and third regions, excepting only the districts from the Oby down to the Irtysh, and on the Ural as far as the Caspian sea, where every year those asthmas prevail which are known under the name of *yafva*. — The fourth region likewise contains a great deal of low lands, partly swampy and partly dry, and saline steppes, which are certainly none of the healthiest.

Rains fall in common very copiously in the northern and middle governments; though this admits of its exceptions. M. Hermann says*, that from the autumn of 1786 till the summer of 1788, in which he writes, the weather in all Siberia, and in many of the russian governments, had been so unusually dry, that such a failure of the crops, and such a want of water at the mines, was never heard of before by the oldest man alive.

Some of the parts adjacent to seas, lakes, and large rivers are often incommoded by thick fogs, but the greater part of the empire enjoys a bright, and but too frequently an air more dry than might be wished.

Most of the governments are subject to great quantities of snow; but not all. In some districts, for instance about Nertschinsk, they are usually but scanty in snow, though the cold of the winter with them is very severe.

* *Staatsische Schilderung von Russland, &c.* p. 55.

The winds are in some parts very violent, especially in Siberia, where reigns a certain tremendous kind of winter-hurricane, which they call *burane*, and which not unfrequently buries both men and cattle in whirlpools of snow and sand.

Storms, in most of the districts, are not so frequent, and generally speaking not by far so violent, as in other places; neither was any mischief ever known to have been done by lightning. In the parts to the north, thunder and lightning are even great rarities.

On the other hand, the northern lights are ordinary appearances; and in many of the northern districts, a few months excepted, are, in a manner, to be seen daily.

Earthquakes in most of these parts happen but seldom. Yet there have been some, felt over *Kamtshatka* to the mountains of *Altai* *.

In the northern districts the days in winter are extremely short; but in summer therefore so

* In the year 1741 three earthquakes were felt on *Bering's* island; and in 1780 a violent earthquake committed great depredations on the *Kurilli* islands, particularly on the 15th, 16th, and 17th. On the 21st of January 1725, and again in 1768 and 1769, earthquakes were felt in *Daouria*, *Irkutsk*, &c. and in 1734 at *Tomsk*. In the vicinity of *Baikal* lake almost every year smart shocks are felt. *Georgi*.

much the longer. On the shortest day, the 10th of December, old style,

	the sun rises,		and sets,
In Astrakhan, about	48 min. after 7.	12 min. after 4.	
Kief, - - -	7	8.	53 3.
Mosco, - -	37	8.	23 3.
Riga, - - -	47	8.	13 3.
Tobolsk, - -	56	8.	4 3.
St. Petersburg,	15	9.	45 2.
Archangel, -	24	10.	36 1.

The quality of the soil, in this enormous empire, as may well be supposed, is extremely various. There are entire, and they very extensive governments, that are full of mountains: but others, in still greater number, that consist of vast steppes and plains, some of which are inex-
plorable to the eye.

I shall conclude this head with a few general remarks made by that diligent and accurate surveyor, capt. Pleschényef: "Russia (says he) is divided by nature into two great parts by a range of mountains called Ural, which form one continued uninterrupted barrier across the whole breadth of it, dividing Siberia from the rest of Russia.

"That part of Russia which lies on this side the Ural mountains, presents a vast extended plain verging towards the west by an easy gradation. This plain, from its prodigious extent, has a great
variety

variety of climates, soils, and products. The northern part of it is very woody, marshy, but little capable of cultivation, and has a sensible declension towards the white sea and the frozen ocean. The other part of this extensive plain includes the whole district along the river Volga, as far as the deserts reaching by the Caspian and the sea of Azof, constituting the finest part of Russia, which in general is rich and fertile, having more arable and meadow land, than forests, swamps, or barren deserts.

“ The most remarkable, for superior quality and flavour of every kind of fruit and other productions of the earth, is that part which extends towards Voronetch, Tambof, Penza, and Sinbirsck, as far as the deserts. It every where abounds in an admirably rich soil, consisting of a black mould, strongly impregnated with saltpetre. But that part which commences between the sea of Azof and the Caspian, and extending near the shores of the latter, runs between the Volga and the Ural, and then stretching as far as the river Emba, is nothing but a desert, level, arid, high, sterile, and full of saline lakes.

“ The part lying on the other side of the Ural mountains, known by the name of Siberia, is a flat tract of land of considerable extent, declining imperceptibly towards the frozen ocean, and by

equally gentle gradations rising towards the south; where at last it forms a great chain of mountains, making the boundary of Russia on the side of China. Between the two rivers Oby and Irtysh, and the Altay mountains, runs a very extensive plain, called the Barabinskaja steppe, or the deserts of Baraba, the northern part whereof is excellently adapted to agriculture; but the southern, on the contrary, is a barren desert, full of sands and marshes. The country between the rivers Oby and Yenisey consists more of woodland than of open field; and the other side of the Yenisey is entirely covered with impervious woods, as far as the lake Baikal; but the soil is every where fruitful: and wherever the natives have been at the pains of clearing and draining the grounds, it proves to be rich, and highly fit for cultivation. The parts beyond the Baikal are surrounded by ridges of high, stony mountains. Proceeding farther on towards the east, the climate of Siberia becomes gradually more and more severe, the summer shortens, the winter grows longer, and the frosts are more intense.

“ In such temperature of climate, the greater part of Siberia, that is, the middle and southern latitudes of it, as far as the river Lena, is extremely fertile and fit for every kind of produce; but

but the northern and eastern parts, being encumbered with wood, are deprived of this advantage, being unfit both for pasturage and culture. The whole of this part, as far as the 60th degree of north lat. and to the frozen ocean, is full of bogs and morasses covered with moss, which would be absolutely impassable, did not the ice, which never thaws deeper than seven inches, remain entire beneath it."

Nature of the soil.

In this particular a still greater diversity is observable than in climate. Here are delightful and charming regions, where Nature seems to have dispensed her gifts of every kind with an unsparing hand*; while towards others she has acted so like a stepmother that all appears desert and gloomy. We must not judge of the country at large from either the one or the other of these appearances. If, however, we were to divide the ground and soil into classes, it might be done in something of the following manner, yet without particular regard to the several kinds of earth and strata.

* And yet numbers of foreigners still adhere to the foolish notion that Russia is entirely a rude country, and has not a trace to shew of beautiful Nature,

Arable land.

Under this head we must reckon various tracts of land, especially, 1. those that are kept in constant cultivation and tillage, such as are every where seen in Great and Little Russia, in the provinces bordering on the Baltic, and many others. 2. Such as are only used at times, and left quiet for a great length of time. In some regions, for instance, in Little Russia, about the Don *, &c. where they are looked upon as steppes, which if merely ploughed and then sown, would be productive; in others, for example, in Livonia, Esthonia, and Ingria, where they are rendered fertile by fire, and are called by the countrymen bush-lands †. On such parcels of ground, which are either allotted into particular possessions, or without a proper owner, villages might be gradually erected. In uninhabited districts these tracts are most frequent. 3. Those that are proper for agriculture, but lie totally unemployed: they wait only for industrious hands. There are still plenty of these vast tracts, where millions of

* The Don kozak takes, in whatever part of the steppe he chooses, a piece fit for cultivation, and bestows his labour upon it as long as he thinks proper, or as long as its visible fertility will amply reward his labour.

† See Hupel Lief. and Esthl. vol. ii.

men might find work and profit, especially in fruitful steppes, and in numberless large forests.

The fertility of all these tracts is very different according to the quality of the soil. In Livonia and Esthonia, from good fields they reap 8, and in successful years from 10 to 12 fold; from indifferent ground about only 3, but from better at times 16 or even more than 20 fold. The harvests about the Don are commonly 10 fold; but towards Tomsk on the Tshumush, and in the whole region between the Oby and the Tom, many fields afford an increase of 25 to 30 fold*; and at Krasnoyarsk the failure of a crop was never heard of: of winter-corn they reap 8, of barley 12, and of oats 20 fold†.

In Little Russia, on the Don, and in many other places, the fields are never manured, only ploughed once, just to turn up the earth, afterwards harrowed, and then sown: more culture, especially dunging, would push the corn up too luxuriantly or parch it, and so hurt the harvest; as the soil is sufficiently fertile of itself. Of equal goodness is the ground in great part of Siberia: for example, on the Samara; on the Ufa in the country of the Bashkirs; here and there in the

* Pallas, vol. ii. p. 650 & seq.

† Ibid. vol. iii. p. 6.

Baraba, or the barabinian steppe; also on the Kama, whence a great quantity of corn is sent to the northern cornless dwelling-places on the Dvina and Petshora. In like manner too in the government of Isetsk the soil generally consists of a black earth to the depth of an ell, consequently is proper for tillage, for meadow-land, and garden-ground. On the Oby near Barnaul, the black earth does not indeed go very deep, but the marly clay * that lies under it, fertilizes it so much as to make it, in some places, yield plentiful harvests, without manuring, for twenty years successively †. At Krasnoyarsk, the fields will bear no manure whatever, and yet continue fruitful for 10 or 15 years, if only suffered to lie fallow every third year ‡. When the fertility ceases, the boor takes a fresh piece from the steppe. On the Selenga, in the district of Selenghinsk, the fields are hilly, and yet will bear no manure, as it is found on repeated trial to spoil the corn §.

* A dark-grey earth, about a foot deep, beneath which runs a layer of clay, and is held in many places to be fine arable land.

† Pallas, vol. ii. p. 641. ‡ Ibid. vol. iii. p. 6.

§ Ibid. p. 168.

Meadows,

Meadows.

These are in an abundance not to be described; though here and there a district may be in want of them: but regularly established farms, on account of the long winters, require a great supply of hay. At the same time there are large tracts of country, where the meadows (which in many places are called hay-crops, and when they are overflowed by some river every spring, *luchten*) are not used as such at all, either because the people want no hay, or because from laziness they do not cut it, but oblige their cattle throughout the winter to seek a poor nourishment on the pasture-grounds, and sometimes even under the snow.

Hence it follows, that artificial meads, as not deemed necessary, are unusual. Where a want of them is seen, there is commonly a deficiency in land fit for that purpose *, or the people choose rather to turn it into arable. However, some steppes produce the best meadow-grass for provender, and yield seed for making artificial meadows; such as the *esparcette*, the alpine *hedy-sarium*, clover, various kinds of *artemisia*, pulse, starflower plants †, and fine grasses that will bear any climate.

* Sometimes also a want of people or of time, but most frequently laziness, is the reason that the increase of meadows is neglected.

† *Pallas*, vol. ii. p. 75.

All the meadows may be reduced to these four kinds: 1. Fine productive meads that have a good black, but somewhat moist soil: these yield the greatest crops of hay; to them belong the luchten. 2. Dry, whereof the soil is fit for agriculture, and at times is so employed; they commonly yield a short but very nutritious hay. 3. Watery and marshy; these do not produce the best, but give a very serviceable hay in cases of scarcity in parching summers and dry places. 4. Fat steppes, where the grass in some parts grows to the height of a man: they are seldom mown.

Numbers of watery-meadows might be much improved by draining, and where the moss impedes the growth of grass, by cultivation; but these works are rarely undertaken; only sometimes a careful landlord enlarges his meadows by clearing the brushwood, or by adding a fresh piece to them from the forest; but it is generally thought unnecessary, or at least very difficult, to make them level*; and therefore many meadow-lands have more the appearance of a desert. — In districts where the grass is bad, rank, and acrid, the horses and cows are gradually accus-

* To remove the inequalities arising from moles, moss, &c. is difficult, but very advantageous. — The collected hillocks make excellent manure.

tomed to it, and eat it from hunger, without being followed by any perceptible injury or sickness.

3. *Forests.*

Some regions suffer a great scarcity of wood; and consequently, if not all, yet a part of them are uninhabited: whereas others have such a superfluity of prodigious forests, that no use can be made of them. In Great Russia, which, however, is much more thickly peopled than the remoter regions, these are seen: as a proof we need only mention the great and almost unused forests between Petersburg and Mosco; as also those between Vladimir and Arsamias, which appear even frightful to many travellers. In Siberia are some even larger; for example, about the Ural mountains; in the district of the river Tara; on the Ufa as far as the Kama; and the mountainous and uninhabited tract of the forest Ateriskoy, between what lately were the provinces of Perme and Ufa, is 75 versts over*. Where there are no iron-works, no towns nor rivers in the neighbourhood, these fine forests can neither be used nor their products be turned into money. The largest trees fall down with age, or are

* See Pallas, vol. iii. p. 466. 470. and 472.

broke by storms, lie rotting upon the ground, hinder the young shoots in their growth, and give the forests a dismal appearance. They often cut down large quantities without making any use of them. So, lately, on account of the highway robbers, who are apt to infest the forests, great cuts have been made on both sides of the ways, which give a freer prospect, and allow the air and the sun to act with greater effect in drying the road.

There is a great diversity of trees in the Russian empire, some of which shall be mentioned more particularly hereafter. The large oak forests in the government of Kazan are spared and managed with care, as the crown is supplied with ship-timber from them. The oak-forests in Livonia and Esthonia are but small; in Siberia they are not found to grow.

On the subject of forests a few further remarks are still to be made. The empress began to think seriously of their proper management, which formerly extended only to particular provinces: but was now to reach over the whole empire. By a decree of the 26th of March 1786, it is ordered that the forests belonging to the crown shall be described, surveyed, surrounded with a ditch, and regularly set off into portions for felling.

felling *. The senate therefore issued its commands on the 18th of December 1791, to the general governors and their lieutenants, for this purpose. — However, it must be confessed that the proper culture of timber, in many, or even in most parts of the empire, is still to be reckoned among the unusual matters of office; and that too even where a sensible scarcity calls aloud for the utmost care. A due partition of the falls is but rarely attended to by a private proprietor; the whole of his care commonly goes no farther than to the sparing of an adjacent copse that serves for an ornament to his mansion, or is favourable to the pleasures of the chace, or affords a shelter in case of necessity. From similar causes several forests about St. Petersburg are kept up with the greatest attention. — The negligence that has hitherto prevailed in these respects has already long ago in some districts put a total stop to their mine-works, for want of the necessary fire-wood. — At the same time it is not to be wished that this oeconomy in the

* As to such as are private property every proprietor is left to his own discretion; it being one of the inherent rights of the nation, that every landholder shall have the free administration of his own possessions: and the government has never yet taken any step towards the limitation of the subject's voluntary management of his forests and lands.

article of trees should be carried to extremity, without having a due respect for the constitution of the provinces and the claims of the boors. These, as vassals can possess no immovable property: all the wood they want they fetch gratis from the forests of their lord; which, from ancient custom, they treat as their own property. They may be compelled, however the late regulation may seem to be against it, to confine themselves to the fall of wood allotted for the time; only neither a kameralhof, nor the hereditary lord, or his rangers, must pretend to ascertain how much each boor shall annually take away from the fall; as his wants cannot be precisely calculated, nor are they every year equally great. He will never fetch away more than he has occasion for at home, unless he finds a convenient opportunity for carrying on a petty trade in the article of firing. Even this ought not to be too scrupulously forbid for two reasons: first, because, without this, many towns would be entirely destitute of fuel; secondly, because the boor would thus be deprived of the means of support on a failure of the harvest, or in any other misfortune. There are places where the inhabitants mostly gain their livelihood from the forests; as at Kargapol, for example. Consequently, the management of woods, as practised in

•

in

in England and other foreign parts, could not be altogether introduced into Russia. — The proposal to remove all difficulties by allotting to every cottage its peculiar portion of forest, could not be every where executed ; and it might likewise give room to apprehend lest the then possessor, by negligence or by too prodigal a sale of his share, might soon let it go to ruin, if competent overseers were not appointed ; who, as is felt by frequent experience in Livonia, are either thieves themselves, or for a trifle of money will wink at the depredations of others.

4. *Mountains.*

Several governments are very flat, and almost one plain throughout ; whereas in others are seen not only lofty mountains standing insulated and alone, but also large chains or ridges of mountains. Among others those of Finland, Taurida, Kamtschatka, &c. But the most noted, and in many respects the most beneficial, is that of the lofty Ural. It may be divided into three parts ; the kirghisian, the part abounding with ore, and the desert, which reaches as far as the frozen ocean, and is still for the most part uninhabited and unexplored. This monstrous ridge is usually held to be the line between Europe and Asia, in such manner that one side belongs to

each of these quarters of the world. Pallas thinks * that the arm of it which bears the name of Obshirts, and traverses the country between the river Ural and the Samara, may be admitted as the border as far as the Caspian. — The chalk-hills on the Don compose a large chain, with those on the Bufuluk †. One principal chain is that which forms the natural boundary between the russian empire and that part of Soongoria which now belongs to China; called, from the Irtilsh to the Oby, the Altaian; from the Oby to the Yenissey, the sayane mountains, and runs between the Amoor and the Lena, even to the eastern ocean ‡. Generally speaking, all Daouria and the regions lying beyond the Baikal, are mountainous, and many of its particular hills are of considerable height. — Moreover, arms of Caucasus and the carpathian mountains extend into the european part of the empire.

In general, it is to be remarked, that some are covered with eternal snow and ice, while others are clothed with forests and a beautiful herbage. From the fiberian mountains great advantages accrue to the nation on account of the excellent metals with which they abound. Others contain

* Travels, vol. ii. p. 312 † Ibid. vol. iii. p. 682. 684.

‡ Ibid. vol. ii. p. 510.

salt-springs, (and even whole mountains of salt,) or sulphureous and otherwise excellent wells; besides a variety of other valuable products. But there are also large sand-hills, which seem to stand there for no use whatever, and to have arisen merely from the casual effects of inundations: they bear, however, sometimes a sort of grass and herbs. Such are found in the sandy desert Naryn and on the river Achtuba, likewise about the Don, and the Ilovla that falls into it *. — On the peninsula of Kamtschatka and on some of the islands in the eastern ocean are burning mountains. — The lofty mountains, from the quantity of melted snow, during the summer, frequently cause inundations.

5. *Steppes.*

This term does not properly denote low and watery places, or morasses, but dry, elevated, extensive, and for the most part uninhabited plains. Some of them being destitute of wood and water, are therefore uninhabitable; others have shrubs growing on them, and are watered by streams, at least have springs or wells, though they are void of inhabitants; yet in these nomadic people wander about with their herds and flocks, and thus make them, if not their constant, yet their

* See Pallas, vol. iii. p. 540. 548. 683.

summer residence. In many of them are seen villages. — Some occupy a very large space: thus, it is calculated that the steppe between Samara and the town of Ural'sk * amounts in length to upwards of 700 versts; but, as every twenty or thirty versts we come to a lake or river, the Ural-kozaks traverse them when they fetch their meal from Samara. — Probably hereafter several of these steppes, at least in some places, will be cultivated, if they wish to raise forests upon them.

In regard to the soil an extreme variety prevails, either being very fruitful and proper for agriculture or for meadow-land, or indiscriminately for both. Accordingly in the steppe about the Don, the kozaks of those parts employ themselves in agriculture, as well as in the breeding of cattle. Some of them furnish excellent pasture by their fine herbage, as the southern tract of the isetskoi province, and the steppe of the middle horde of the Kirghiz†. Or the soil is unfruitful: whether it be the sand, the salt, or the stone it contains that is the cause of it. Among these are to be reckoned the sandy steppe on the Irtysh near Omsk; in general we find about the mountains up the Irtysh pure arid

* Formerly Yaik.

† Pallas, vol. ii. p. 75.

steppes, and therefore no villages. Also the Krasno-ufimskoi, between the rivers Belaia, Kama, and Tchuffovaia, towards the Ural-chain, is mostly sandy; and that on the Argoun towards the borders of China, is of a still worse soil, consisting of rocky particles and flint. The whole of the steppe along the river Kufhum, towards the town of Ural'sk, is described by prof. Pallas* as dry, poor, saline, and unfit for any kind of agriculture, for the breed of cattle, and even for permanent inhabitants; there is not even a solitary shrub to be seen, much less any wood. In general saline spots are not unfrequent in the steppes; and here and there we also meet with salt-lakes: however, such districts may invite to camel-pasture.

Most of the steppes are of a changing soil. So Pallas calls the extensive Baraba, from the Irtysh to the Oby, a beautiful country blessed with game and fish; for though one part of it is saline, yet it contains a great many lakes as well as large tracts very well adapted to agriculture. So likewise is the vast steppe of Kuman in many places sandy, dry, and destitute of water; yet its flats which border on the river Kuma seem formerly to have been well peopled, and at present very favourable to that end.

* Travels, vol. iii. p. 525.

The steppes are frequently fired, either by the negligence of travellers, or on purpose by the herdsmen, in order to forward the crops of grafs; or, it may be, out of malice, as some years since the kozaks of the Yaik did; when, having risen in rebellion, a small corps of russian troops advancing against them, they saw themselves all at once almost entirely surrounded by the high grafs on fire. Such a catastrophe often occasions great mischief; the flames spread themselves far and wide, put the dwellings of the inhabitants in imminent danger, consume the corn on the ground, and even seize on the forests. Many prohibitions under severe penalties have accordingly been issued against this practice, but they seldom have any effect *. All the steppes may be considered as a sort of common land.

Morasses.

Of these also are great plenty, and of very various magnitudes. Thus the northern verge of Siberia towards the shores of the frozen ocean, for several hundred versts in width, is one prodigious watery morass, grown over with moss, and entirely destitute of wood, and which in summer is only thawed to the depth of about a span †. In the interior of the empire we meet

* See Pallas, vol. ii. p. 378. † Ibid. vol. iii. p. 23.

with smaller ; and many of the forests have a swampy bottom : among others may be noticed the tract between the rivers Kama and Viætka, which is very woody and boggy.

They may be reduced under the following four general kinds : 1. Simply low watery land ; such is capable of being improved, by letting off the water in the common methods, or by removing the trees that shade the ground, and prevent the wind and the sun from acting upon it ; it then may become good meadow and arable land. 2. Swamps, which, when they have but some drain for the water, bear at least shrubs ; they yield turf formed out of the moss, and even at times produce a little hay. 3. Bottomless morasses, which appear to be lakes grown over. They frequently will bear neither man nor beast. Only when they gradually thicken their upper shell by vegetation, some grass may be cut upon them. They admit of no farther improvement than what Nature herself effects by degrees. Sometimes they have a few miserable low bushes upon them, but generally none at all. 4. Moss-morasses, the deep and useless moss of which will permit neither grass nor a shrub to grow, or at most only a few low wretched sticks of fir, &c. which presently wither and die. They are absolutely unprofitable ; at least they are held to be so.

Thus we see that some morasses are not without their utility, either by yielding a little hay in dry seasons, or as containing turf, which in parts that produce no wood may be advantageously employed. Yet even the worst morasses cannot be pronounced destitute of all utility : at least in wet, rainy years they draw off a great quantity of water into them, and thereby prevent inundations, even such as would arise from the melting snows, and last a long time ; they therefore help to dry more speedily the higher lands that have been overflowed.

Wastes.

Tracts which, by reason of their rocky or at least stony soil, admit of no cultivation ; or on account of their deep quicksands, which will scarcely suffer a poor blade of grass to shoot up ; or on account of their moss, or their eternal ice, are totally unfruitful, seem to require no particular class, as they may aptly enough be referred to that of the wild steppes or the horrid morasses. Yet travellers sometimes speak of sand-wastes. One of this sort, open, bare of shrubs or bushes, is seen near Shelesenska * ; also on the Irtysh and in the Baraba are sandy and saline wastes, which never can be turned to any purposes of agricul-

* Pallas, vol. ii. p. 462.

ture*. Still larger is the sand-waste Anketeri, between the rivers Kuma and Terek †. But the largest of all, named Naryn, commences between the river Ufen and the salt-lake Elton, and stretches quite to the Caspian-sea; yet, on the plains between the sand-hills, are good fields, and might here and there be inhabited ‡.

Pasture-grounds.

Neither do these properly need to be particularized; for though there are large tracts of land, serving merely as pasture, yet in general fields, meads, forests, steppes, morasses, and even wastes, are used as such. The empire contains them in an innumerable abundance; many, from their fine grasses and fodder, are of uncommon goodness. Hence it is, that in so many parts we have such excellent cattle; and the pasture-grounds, which are, strictly speaking, commons, invite as it were to the nurture of cattle. The whole Ukraine, the country near Archangel, and some of the steppes, are famous for their excellent pastures, and consequently for their fine cattle.

* Pallas, vol. iii. p. 274.

† Id. *ibid.* p. 541 and 590.

‡ Id. *ibid.* p. 532, & seq.

By a late ordinance, on each side of the high-roads all over the empire a broad space is left, which may not be granted to any person as property, nor be ploughed nor mown, but remain free that travellers may always find pasture for their horses, as well as drovers for their cattle, along the roads to the various towns.

Salt-places.

These are not usually introduced under the head of land and soil of a country; but in treating of Russia it is necessary, from the inexhaustible quantity of its salt-places, which are of exceeding great importance to the state, to its inhabitants, and to the revenue. Especially in Siberia an amazing quantity of salt is produced.

Salt is a monopoly of the crown; which supplies the empire with it at an extremely moderate price *. However, some provinces are excepted, who either fetch their salt themselves entirely free of expence from the lakes; for example, the Ural-kozaks; or buy it of foreigners, as the provinces of the Baltic; and then the crown

* Therefore a guard is constantly kept at the salt-places, to prevent persons from fetching salt from them contrary to law.

takes only the lake-tax. Mr. Pallas complains, in his travels, that from the preparing it at the salt-lakes, from the method of transport, and from general negligence, it is delivered uncommonly foul; and therefore he recommends the rock-salt, which is easily clarified. Omitting the sea-salt *, we may reduce the salt-places under the following classes:

I. Rock-salt from the salt-mountains. To this class belong, among others: 1. The Iletzk in the region of Orenburg, which is well-known from the writings of several authors. 2. That in the mountain-ridge Arfargal-Shoogot in the steppe towards the Volga; it has not hitherto been sufficiently brought into use, but is exceedingly pure and clear†. 3. The salt-hills about 150 versts from Tchernoyar. Probably also the region of mount Bogdo contains the same sort of salt ‡.

II. Salt-lakes, the multitude of which, especially in Siberia, is not to be described; where

* Georgi, in his paper for the prize at the academy, has expressly mentioned the sea-salt near Archangel, which he might justly do, as some salt is actually obtained there from sea-water. And there is no reason why the same methods might not be practised elsewhere if necessary.

† And therefore Mr. Pallas recommends it; travels, vol. iii. p. 543, & seq.

‡ As Mr. Pallas supposes, *id. ibid.* p. 675.

the

the salt, without boiling or any other preparation, forms itself, and shoots into thick scales. Of this kind are : 1. That in the Kuman-steppe, whence the Don-kozaks fetch salt in great quantities *. 2. The lake Elton. The salt that forms itself in this is inexhaustible. 3. Bogdinskoi or Bogdom Dabassu, another inexhaustible salt-lake, in the steppe towards Tzaritzin. Its salt is better than that of the Elton †. 4. Inderkoi, or the salt-lake Inder, in the country of the Ural-kozaks : it is not less than 26 versts in circumference, and yields excellent salt. 5. Ebelai, in the country of Kirghis-kozaks, and particularly in the region where the river Tobol takes its rise. 6. Borsinskoi in Daouria, whence also sometimes Nertschinsk and other places are supplied. 7. The salt-lakes of Usen, whence the Ural-kozaks take their salt. 8. The Gurieffskoi, some of which, and particularly two, are much esteemed. They lie in the Kirghis-steppe. For a long time the produce of them was brought under an escort to Gurief, where every inhabitant received it gratis from the magazine. 9. The Koriakoffskoi salt-lake, in the steppe 22 versts from the Irtysh ; the salt

* Pallas's travels, vol. iii. p. 587, & seq.

† Id. *ibid.* p. 672, & seq.

of which, amounting annually to 450,000 pood, is brought in flat-bottomed boats to Tobolsk*. — To specify particularly other salt-lakes would be superfluous; but they are in great numbers in Taurida and elsewhere.

III. Salt-springs. There are of these which flow with salt in its proper state, for instance, in the government of Irkutsk; but their number is very inconsiderable; and therefore it will only be necessary to notice those where works either are or might be raised. Of this sort, where salt is actually prepared, we find in the government of Perme at three places, viz. 1. In the town of Solikamsk. 2. In the village Ussoliye. 3. In the hamlet Chusovskoi-gorodok. Some belong to the crown, and others to private owners, who deliver their salt to the crown at a price agreed on. — But there are also of the same kind in other parts; as at Staraia-Russa. Busching is mistaken in saying that the works there are all gone to ruin. General Bauer has very much improved them, and his improvements have been in part introduced in Permian. — The district of Irkutsk uses annually from 60 to 70,000 pood of salt; and that quantity is prepared there. — Sometimes the pood of salt costs the crown on the spot only $4\frac{1}{2}$ kopecks;

* Pallas, vol. ii. p. 473.

but with the freight in Kungour 12, though in Nishnei-Novgorod no more than about 10 kopecks.

IV. Salt-streams. Salt or saline streams are numerous, besides those which Mr. Pallas has mentioned by name *. Speaking of the stream Solenka, which falls into the Achtuba, he is of opinion that its kitchen-salt would increase by damping it in the heat of the sun.

V. Salt-grounds, which are dry, are found in abundance ; as on the western margin of the sand-waste Naryn, and in the Kuman-steppe ; likewise in the steppe between the town Ural'sk and Astrakhan ; some are so salt, that many bare places appear entirely white with it. — The Tavri-nor is a dry flat salt-ground in Daouria, extending in length, towards Mongolia, 30 versts, and in its greatest breadth above 20 : it may be considered as a great emptied lake. The steppes of Isset, Ischim, and the Baraba, as also the region beyond the Baikal, are rich in natrous glauber-salt ; bitter-salt-grounds are likewise seen about the rivers Selenga, Chilok, Chikoi, Onon, and Argoun. So the steppe about the stream Kushum, towards Ural'sk, contains many saline places †.

* Travels, vol. iii. p. 585. † Id. *ibid.* *passim.*

Mines.

These still less than the salt-places seem to belong to the present section : but, on account of their great number and productiveness, they require notice under a peculiar head ; and I could find no fitter place than this to introduce it.

Almost all the mine-works of the empire are of the present century ; being first set forward by Peter the great. But, though some pretend that the attempts made by tzar Alexey Michailovitch in 1676 were of no effect, yet this requires some rectification. The academical kalendar of St. Petersburg for the year 1790 mentions that the first discovery of copper and iron ore was made 162 years ago, and that then the first iron was made into bars. This then implies no ineffectual attempt : there were already in the last century, in the parts about Mosco, iron-works, which brought their proprietors considerable profit *. However, at that time, all metals, even iron, were scarce in Russia ; and there were noblemen who could not shew an iron nail in their houses. Indeed there are still but few mines in Great-Rus-

* A german merchant of Mosco, named Miller, was one of these ; and the family of Demidof had then begun to work their mines.

sia * ; but so much the more numerous are they in Siberia : when once these were discovered and opened, the russian empire had plenty of metals of all kinds. They may be pronounced inexhaustible, in the strictest sense of the word : they yield, according to their different descriptions, gold, silver, copper, iron, lead, semi-metals, stone, &c. That native gold, silver, and copper are also found, we have sufficient testimony from professor Pallas †. The works erected at them are in great multitudes ; and yet they might be very much increased, as vast quantities of ore lie still untouched for want of hands, and here and there for want of forests. The greater part of those now working are in the spacious mineral mountain-ridge of Ural ; which is covered with great forests, though they are already in many places entirely consumed in the works ‡. From all an incredible quantity of copper and iron is produced ; they were mostly not undertaken till towards the middle of the present

* Indications of metals are found in many parts, even in Livonia and in Finland, or the present government of Viborg ; but are not worked on account of their little consistence.

† Travels, vol. ii. p. 60, & seq.

‡ Some are of opinion that no woods can grow on mineral-mountains.

century.

century. They are so very numerous that some of them are presently abandoned on the supposition that they are poor, or that richer may be found in the vicinity *. The Bashkirs of these parts are diligent searchers for mines, and readily impart their discoveries, when encouraged to it by little rewards. — Among the mineral-mountains the Schlangenberg is remarkably productive in gold and silver; the Tschudes explored it several ages ago. It forms a part of the Altaian-chain, but stands distinct from it, about 95 versts northward from the Irtysh. In the mountains of the Yenissey traces of the noble metals are every where discovered: they may probably therefore some time hence come into great employ.

The emperor Peter I. was very solicitous to make the most advantage of such a source of employment and wealth as the russian mines presented, and therefore made it his study to encourage his subjects to work them. Accordingly, about the year 1719, he issued a grant in favour

* Several have been given up without sufficient reason, on false information: an instance whereof is given by Pallas, in his travels, vol. iii. p. 381. Sometimes a mine is abandoned till the wood is grown up again. They do not take the trouble to separate the silver and gold from the copper, because they can have it at a cheaper rate. This accounts for the copper coin of Siberia having a mixture of gold in it.

of miners ; wherein, among other things, he ordains, that the works shall be erected at the cost of the crown, and that then they shall be settled in perpetuity on the individual ; but from whom the reimbursement of the first expence shall be demanded by instalments proportionate to the produce. At the same time he regulates the imperialty, and orders that every mine-work shall have a stated number of crown-boors appropriated to it, yet only so far as that they may earn their head-money ; that is, that they may work it out ; but the masters of the works pay this tax into the coffers of the crown. Afterwards, however, he had not time, or forgot to fix precisely by what rule this labour should be appreciated ; when it was to be demanded, &c. — In the archives of the college of mines, now abolished, is a writing signed by the emperor's own hand, with the signatures of a commission consisting of eight persons : whence it appears, that in the year 1722 he intended to farm out all the mine-works belonging to the crown to the french Mississippi-company ; but this matter was never brought to effect. — The empress Anna began by conducting the mines in the saxon manner ; as the principal director at that time was a native of Saxony ; and issued other regulations concerning the crown-boors working for their head-

head-money. — The empress Elizabeth followed the advice of some persons, who were not favourable to the Germans; and therefore whatever these had introduced was now rejected. She made grants of mines to several rich russian families, with great numbers of crown-boors, whom every mine-owner tasked with as much labour as he pleased for their trifling head-money: which caused many insurrections among them.

— When Catherine II. mounted the throne, she made it her first endeavour to remedy the present grievances, and to prevent them for the future; but in this she proceeded with the greatest precaution. Accordingly, in 1766 she instituted a particular commission, to examine into the whole state of the business, and to lay before her the result of their inquiries. Count Peter Panin presided at this board, and had several respectable men to assist him. From the extent of the affairs they had to inspect, and the intervention of several accidents, the progress they made was slow; in the mean time matters became daily more pressing, and the empress demanded a speedy termination, as the boors, who had been made to hope for some relief, were kept in anxious expectation by the delay. At length the commissioners brought the affair to a conclusion. It was not possible entirely to

free the crown-boors from the labour of the mines, as their obligation to it was founded on law; namely, the patent and regulation relating to mines abovementioned; and, moreover, as without these labours several mine-undertakings must have totally gone to ruin. But the empress found out an expedient, by precisely defining those tasks, whereby the works might be kept up, and the boors completely satisfied. In what manner this was done will presently be shewn.

We have seen that the mines belong, some to the crown, and others to private-owners. What the former produce, will more properly be introduced in the section of the revenues of the empire. It is here only necessary just to mention that to the crown principally belong the following: 1. Several iron-works in various places. 2. Several copper-mines, likewise in various places, particularly in the government of Perme. 3. The gold-works or gold-washes at Ekaterinenburg. 4. Some silver-works, of great consequence; as at Nertschinsk, which sometimes go under the name of the Argoun-works, as they are called by Busching: but on the Argoun are at present no erections, as it was found necessary to remove them to Nertschinsk. But those of Kolyvan are the greatest and most productive, also

also denominated from Barnaul or Kolyvanovskresenskoi; and the beforementioned richly-yielding Schlangenberg, from which the ore is carried to the works at Barnaul or Kolyvan, is of this number. Of the silver it is to be remarked, that gold is also separated from it; which is sent only to Petersburg, as the place to which the black-silver goes from the works. The gold and silver are looked upon as pure gain, as all the necessary expences are repaid by the copper at the same time obtained. All I am able to learn concerning the quantity of gold produced at Barnaul and the Schlangenberg is, that, from 1745 to 1780 it amounted to 686 pood, 16 pound, 49 solotniks of pure gold.

The mine-undertakings of private individuals met with every needful encouragement from the crown. Whoever discovered a mine and was inclined to work it, was allowed to make the proper dispositions in erections, digging, &c. for which he was granted ten years free; the adventurer was put in possession of the property of the ground as a freehold, provided it belonged to the crown *, with convenient places on the banks of streams and rivers for the works and necessary buildings, and a considerable extent of forest;

* Many afterwards obtained a mine by purchase, &c.

and when he had no boors of his own that he could set to work, he received a certain number out of those raised for recruits ; who were always to remain with the works, and to multiply themselves there ; if these proved insufficient, other boors were given him, to perform the occasional labours in lieu of their head-money. Only, in all private undertakings of this sort, the crown retained certain imperialia, such as : 1. All the silver found to be delivered to government for a stated compensation. 2. A yearly tax on every furnace ; for the principal one in iron-works 100 rubles ; for every copper smelting-furnace 5 rubles. 3. Of copper and crude iron one tenth. 4. The half of all copper, for coinage ; for which the proprietor received $5\frac{1}{2}$ rubles per pood. 5. All sorts of vessels for the artillery and the admiralty for a stated price, settled in 1715 and 1728. 6. The tithe of the capital of the minerals or ores.

In all this the late empress, to the exceeding great benefit of the proprietors, and to the encouragement of her subjects, made many alterations ; by several edicts or ukases having relinquished the imperialia, and abolished the taxes. The delivery for the admiralty and the artillery was given up in 1770 ; and, as an act of grace on occasion of the peace of 1775, the tenth of

the capital of the minerals, as well as the tax on the furnaces, with the tenth of the copper and raw iron, were remitted. As to the delivery of one moiety of the copper at a stated price for coinage, a short account will be given of it under the article of revenue. Lastly, the empress, by an ukase of the 28th of June 1782, entirely abolished the requisition of the silver; and permitted the private proprietors to explore gold and silver for themselves; only the ground must entirely belong to the undertaker, or be voluntarily made over to him, and the work must only be performed by his own or hired free people: for neither crown-boors nor crown-forests are any longer to be granted*. In virtue of this ukase the mine-owner is at liberty to sell at pleasure whatever gold and silver and precious stones he finds: only with this reservation, that he pay the tenth of the two former into the coffers of the empress. This however was somewhat altered in favour of the nobility by ukase in 1785, who are thereby allowed to open mines on their own estates, and to dispose of the silver and gold they find, at pleasure, without any tribute to the crown.

Thus, by the aforementioned ukases and act of grace, important advantages are accorded to

* Indeed the crown has no longer such abundance of either as to be able to do it.

the owners of mines and first adventurers, and the royalties usually required in other kingdoms and empires, are sacrificed to the benefit of the subject and the augmentation of the national wealth. Notwithstanding which, we have not heard, that since that time, at least not since the interval between 1782 and 1786, any new works have been erected, though there are still mines enough to be discovered. But many who would adventure are in want of people; the forests begin here and there to decline; and such undertakings require great capitals. Neither have there been, since those ukases, any gold and silver mines opened by private individuals: there is indeed one owned by a person in the mineral mountains of Nertschinsk; but he had the grant of it before that period.

The crown has occasionally, not merely granted one of its mine-works, according to the original institution, but regularly sold it to a private person. Thus, one of three iron-works, and that a very productive one, was purchased, with all the people belonging to it, pits and erections, together with a considerable forest, for 200,000 rubles, as we are informed by professor Pallas; who also mentions another in similar circumstances. The crown has also bought some of them back again. — Instances are not wanting
of

of private persons who have unlawfully appropriated to themselves mines belonging to the crown.

In cases where the proprietor does not reside on the spot, he appoints an overseer, who is rarely a person of condition, such as a disbanded officer, &c. but usually a vassal from among the boors, who can read and write, and is called a prikaschik. Such an one at times has the management of an estate or comtoir, turning half a million of rubles annually, provides for the whole concern, and makes his employer rich. In other countries some dozens of persons would be placed in such a trust, as checks on one another.

In regard to the workmen it has already been observed, that at first it was the practice to assign a certain number of crown-boors to private adventurers, (many of whom, being simply merchants, had no vassals, and could procure no voluntary workmen,) who were to work out their head-money in that capacity. But from this method oppressions arose: the people were allowed no respite from labour, with hardly any recompence, and no consideration had to the length of way they must travel to the works, &c. During the reign of the empress Elizabeth they therefore rose in many villages; so that it was

necessary to send regiments of soldiers against them, which occasioned lamentable scenes, but which are not to our present purpose. The late empress put a stop to all these horrors, by ascertaining when and how much the boors should work for their head-money. Since that time they can only be set on when they have no labours of husbandry to do ; so that in summer they sometimes want hands at the mines. For their head-money, of 170 kopecks each soul, they work at the rate of every day in summer, with a horse, 20 kopecks ; without a horse 10 ; but in the winter they are paid 12 and 8 kopecks a-day. Some masters hire men from other parts, even crown-boors, when they have none of their own. To such volunteers they pay at some works from 13 to 15 kopecks for every 100 pood of ore. Where the upper ore is easy to be got, boys and girls are employed at the rate of 3 kopecks per day : they press in crowds to this employment. — The master workmen at the crown-mines are obliged to get 100 pood of ore every 12 hours ; for which they are paid from 14 to 18 rubles per annum ; but a man that separates the ore, 24 rubles. — The ore is usually roasted on the spot, and then conveyed, sometimes by voluntary carriers, to the smelting-houses ; these receive for every pood, when they have 3 versts to carry it, a quarter

a quarter of a kopeck ; and when the distance is 15 versts, three quarters of a kopeck, carriage-hire. — At the crown-mines of Barnaul, besides their own people, they employ about 48,000 boors, who earn their head-money there. They have always been well treated, even before the ukase of 1782.

The mines of the Schlangenberg, and in general the Barnaul, are in all respects of great consequence. Of the gold and silver we shall be more particular when we come to speak of the revenue ; but copper and iron require some notice here. The pood of copper stands the proprietor in somewhat above 4 or 5 rubles. In trade it is reckoned there at 9 rubles. In Petersburg it is far dearer. According to Pallas's statement, at some pits on the Ural, a hundred weight of good copper-ore yields 24 pounds of copper, and $\frac{1}{4}$ to $1\frac{1}{2}$ lots of fine silver ; consequently, from 100 pood of ore nearly 2 pounds of silver may be got. Hermann reckons only from 1 to 5 per cent. for copper.

They have iron-stone that yields 59 or 60 per cent ; but most commonly it is 25 per cent. Hermann speaks even of 70 per cent. — Raw iron at many works costs the crown not more than 10 or 11 kopecks the pood ; but cast iron from 22 to 25 ; and of sorted iron 41 or 42 kopecks

kopecks the pood ; however in some places it is rather dearer.

The greatest part is shipped outwards, and to that end brought to Petersburg by water. To private proprietors the pood of iron, with the transport to Petersburg, comes at most to from 55 to 60 kopecks ; but it fetches there from 70 to 120 kopecks : in the year 1789 it was much dearer.

Mr. Hermann calculates that the Ural mines (comprehending, however, the salt-work there) since the accession of Catherine II. that is from 1762 to 1787, when he made the estimate, have enriched the empire to the value of 184 millions of rubles. — One wise measure is, that at the Siberian mine-works they have begun to pursue agriculture.

It is a great advantage to the crown, that from its works at Nertsinsk upwards of 60,000 poods of lead may be obtained ; of which about 30,000 poods are delivered at the Barnaul works for smelting the hard ores of that place : and thereby much quicksilver is spared*.

Of the principal mountains of Russia.

The mountains of Russia may be divided into eleven distinct heads, of which the greater part

* Hupel, versuch des staatsverfassung des Russischen reichs darzustellen, vol. i. p. 31, & seqq.

form principal chains of themselves; while others are only continuations of huge ridges, the major part whereof are in the bordering territories. These divisions are: 1. The Sieverniyagori, or northern mountains, extending between the Baltic and the White Sea. 2. The Valday mountains. 3. The mountains of Taurida. 4. The Caucasian mountains. 5. The Ural mountains. 6. The Altay mountains. 7. The Sayane mountains. 8. The Baikal mountains. 9. The Nerchinskaia mountains. 10. The Okhotskoy mountains; and 11. The Kamtschatskoy mountains.

I. The northern mountains, between the Baltic and the White Sea.

The mountains of Russian Lapland.

Under this head are to be classed not only those branches which may be considered as continuations of the Scandinavian range, and enter on the Russian territory between the White-sea and the Onega-lake, but likewise all the mountains of the governments of Viborg, Olonetz, and Archangel; especially those in the circle of Kola, or in Russian Lapland. They lie almost totally beyond the 60th deg. of north lat., and, in length, from west to east, take up a space of more than 15 degrees. They are for the most part but very little known. The accounts we
are

are in possession of are as follow : they proceed from St. Petersburg, where, about the low country on both sides the Neva, and towards the gulf of Finland, the ground plainly appears to be a mixture of sand and slime, with numerous, often very large pieces of granite, and to have been overflowed and left by the sea. In this ground, some forty years ago, as they were digging a deep canal at Strelna, not far from St. Petersburg, towards the neighbouring gulf of Finland, under several alternate strata of stiff loam and earth, nay even below a stratum of stone, the workmen came to an oaken barge, but little altered otherwise than by the black colour it had acquired, with several human skeletons, and heaps of straw or shilf, perfectly distinguishable. From Petersburg, quite to Tonimskoi-yam, we have sandy plains, tending north-eastward till about Olonetz ; thence, proceeding as far as the lake Kotk *, where they extend about the foot of a set of mountains, arising from the Finnish hills, consisting of granite and black (probably micaceous argillaceous) slate, diversified with numerous vales and pits, which, continuing south-eastwards, part the sandy level from the just mentioned trappstone mountains, on this side. Continuing our course from Petrofsk (or Petrosavodsk,

* Kotkozero.

now the chief town of the government of Olonetz), and having passed the iron-works northwards along the western side of the Onega-lake, over the river Shuya which falls into it, and having reached the mountains that abound in iron ore, we meet with one of the principal curiosities of these parts, in the martial waters of Uffona, Muun-ozero, &c. Here are seen a vast quantity of stems, branches, twigs, leaves, and roots of birch-trees, and other exuviae of vegetables, entirely mineralized by iron, with the diverse texture of the rotten wood plainly visible, in which mineralizations the tender white rind, known to be in the highest degree incorruptible, is preserved quite in its natural appearance, the soil changed into a rich ferruginous earth, and the grassy sod into iron ore. The like transmutations are seen in all the low spots and pits that incline towards the Muun lake, but particularly near the martial waters, and over-against the village Buigova. Here lie the iron-ore in a wide-extended valley, forested apart with birch-trees, and with gently-rising hills on both its sides. In this valley, though not in its deepest bottom, issue the martial springs, which, in 1716, by command of Peter I. were fitted with accommodations for public use. The well is sunk about three arshines and a half below the surface, in a hole in ground consisting
of

of heaps of roots both of trees and herbs (which are partly mineralized) and intermingled with flakes of stone, then an arshine and a half in a clayey kind of a stone, mixed with a great quantity of sulphur pyrites. In the deep points of the valley there is a layer of vitriolic earth under the forementioned, which is a mixture of iron-earth and swampy iron-ore*. It is easily got, and is then taken to the vitriol-works there and boiled. The mountain-rock† of the heights rising from the valley is the kind of stone mixed with pyrites beforementioned on the Brunnensole, mingled with gravel. The western heights incline into the Muun lake, from which the peninsula Deknavolok rises to an uncommon height, and still exhibits the same sort of stone mixed with a surprising quantity of gravel and striated with the same fragments. On the northern or more north-western side of the Onega lake, the trapp-stone mountains take their rise from the river Shuya, partly reaching to a considerable height,

* A species of the *raseneisenstein*, *ferrum ochraceum*, *respititium minera ferri subaquosa*; bog or swampy iron ore; phosphate of iron.

† Bergart. The various rocks or stoney substances which compose what in mining is called *the country*, or that part of a mountain which is immediately traversed by the veins composed of ore and the substances which serve as a gangue or matrix.

partly

partly flat, partly protuberant, and only towards the upper end of the lake gently rising, detached, and for the most part stretching to the White Sea. These trappstone mountains, in some places interspersed with serpentinite, are in several directions, says M. Renovantz, visibly (perhaps only apparently) underlaid* by the marble, as at Tievdeva and Pereguba. Near the former of these two villages, which is not far from Onega, the marble rises out of a river swelling to a considerable height, and *unterteuft*, on its greatest elevation, where are found great quantities of white and grey chalk-stone, interspersed with coppery talc†, copper pyrites, and verdigris, about the trappstone mountains towards the Sondall-lake. It is from this mass of marble, as well as from that on the northern part of the Ladoga lake, near Rusksoll and Serdopol, that the blocks are hewn for the imperial erections at St. Petersburg. This marble, lying in flakes, discovers no trace of petrifications, but is in many places plentifully interspersed with particles of friable quartz, which gives it in several parts the quality of emitting sparks upon collision. In the various lakes hereabouts are islands, consisting of the same chalk-stone.

* Unterteuft.

† Kupferglas.

The trappstone mountains proceed from Tievdeva, both on the shores of the Onega lake towards the north-east, and in another direction towards the north. In the bay formed in this lake, called Pereguba, projects a low peninsula, named Pertnavolok, apparently from under the trapp, which consists of a quartzy marble. The trappstone mountain in these parts is frequently covered at its foot with strata of granite, trapp, marble, and quartz, and containing ferruginous and cuprous ore, in nests and heaps just under the sod*. The peninsula Ufnavolok on the east side of the Onega bay, and inclining into the lake of that name, and is in immediate connection with the circular chain of mountains, contains several of the like congeries, in which some portions of vitreous copper ore, a few of asbestos, and still fewer of mica, are interspersed. The striæ of these substances, thus situated, extend in many scarcely to a fathom, and their surface, according to the depth, still less. Another vein of quartz contains specular iron ore, and green schorl. In the middle of the circular chain of mountains, after the mountain has risen to a very great height toward the north-west, and tending farther again toward the north-west, lies a morass overgrown with firs, pines, and birch-trees, from which rises a smaller, and close

* In Taggehängen nestern und geschutten.

by that a higher hill. These two hills consist of a grey trapp, slightly mingled here and there with coppery pyrites. Between the hills runs a course of loose sand, in some places a fathom and a half in depth, in others less, mingled with many large and small pebbles; and under it a heap of from one to two and a half fathoms, as if composed of round grains of quartz run together, and is plentifully mingled with motley and brass-coloured small nodules of copper-pyrites, vitreous copper-ore, cuprous talc ore, green and blue copper-ochre, singly likewise with asbestos, hardened small nodules of clay, little trapp nodules, and some few crystal-gypsum or selenitical nodules, and through which a waving and inclining cleft extends not more than three inches thick, and filled with sand and micæ. These trapp-mountains then proceed towards Lumpuscha on the Onega, and thence, amidst a variety of rivers, morasses, and lakes, on which little granite isles appear; on all sides forming a delightful scene, shaping their course northward to Voyets or Voytz, a peninsula, laved on two of its sides by the lake Vyg and on the third by the river of that name which flows towards the White-sea, where is seen a remarkable gold-mine, long since done working. About Lumpuscha the trapp-mountain is violently shattered; huge rocky fragments, struck off from

VOL. I. I the

the projecting parts, lie scattered at its foot. The trapp is here much mixed with specular iron ore. Not far off is the Vitzga, a stream with numerous falls, flowing out of the superior lakes, and losing itself in the Onega; on one of its shores, which is quite steep, are lofty sand-hills. Hence, till about Povenetz, these mountains gently decline, covered with sand and ponderous masses of granite, to the Onega. Near Povenetz, the river of that name pursues its noisy downward course, over rocks and projecting walls of granite. — In the Vyg lake also several granite islands, among many others, make their appearance, their fossil-quality consisting of feldspar, quartz, and micaceous earth, to the thickness of one's fist; the same is seen in some islands on the coast of the White-sea towards Soroka. The peninsula Voytz, on the other hand, consists of a country of quartz and curved lamellated talc, or a very quartzzy gneiss, which shews itself again about a verst farther to the south, in an island where is an abundance of quartz fragments interspersed with specular iron-ore and copper-pyrites. On the gneissy country of the Voytz-hills appears a coarse serpentine of a greyish-green colour. In this gneiss runs a vein of quartz interspersed with blue copper-ore, in which formerly lumps of native gold of some marcs in weight appeared. — This
Voytz-

Voytz-hill is separated from the western trapp-mountains by the river Vyg, here forty fathoms broad. Directly in flank of the chain, on the western side of the river, is a piece of mountain, several fathoms in length and breadth, entirely bare of soil, which is a true mass of that quartz mountain-rock mixed with talc, amidst other collateral mixtures of the talc, and in conjunction with that mineral subcavating the trapp-stone, which here contains nodules of specular iron-ore frequently as thick as one's fist, and here and there interchanged with serpentine.

About seven versts westward from the Voytzer hill, in which interval several trapp-stone ridges rise, whose natural fossil in many places is replete with little cubes of feldspar, some rock projects on the highest summit of the said mountain, consisting of quartz and talc again between the trapp; and we easily descry in it two parallel veins of quartz, running in a long and strait direction from one to two feet thick, which perhaps are not without hope. — These trapp-mountains proceed yet farther northward, quite to the White-sea; where, lastly, the granite projects close on the shore of the sea, farther to the west, (especially on the bay of Kandalak, and the islands that appear in it,) attains to considerable heights, and exhibits a variety of remarkable

phænomena. For example, vast rocks of granite, projecting from the great cataract of the Summa into that river. On an island called Kimalisha, lying between the mouths of the rivers Shuya and Soroka, off the coast of the White-sea, we have in the granite veins of micaceous earth richly mixed with a beautiful brown frequently glandulous, with granites and green transparent shorl; and between Kemmi and Keret are very large sheets of muscovy glass, produced by ignition * from a coarse-grained granite. — Departing from the Voytzer mountain towards the east, we perceive nothing but the sandy plain diversified with morasses, lakes, and rivulets, from which rise considerable sand-hills mixed with granite, quartz, and pebbles of hornslate, which farther eastward interchange with layers of chalk and gypsum, in which multitudes of petrified marine animals are seen.

Leaving again the beforementioned martial waters, and taking a farther range and more to the westward, from the Onega towards Pertnavolotok and Muun-ozero, the trapp-stratum proceeds in its simple state for the depth of forty feet and more, consisting of a blackish clay copiously mingled with delicate particles of iron

* Muscovy glass by ignition is not allowed by mineralogists in general.

and flat grey squares of feldspar, wherein, in this vein, were several copper-pits, formerly very yielding, but are now exhausted, especially those known under the names of Nadejeda and Nisselskoi, together with that called the silver pit, on strong courses of quartz and spar, which were worked for a space of fifty years and upwards to a considerable depth. — From these pits the mountains tend north-westward towards the borders of Lapland; yet their principal veins still continue to the north, or rather from the north. Their prevalent substance continues to be for the most part trapp, containing superficial veins filled with copper-pyrites. Several of a similar species are seen at Svetnavolok, where the mountain rises quite apart from the rest, and single. — Some of these mountains are covered with blocks of quartz of an astonishing magnitude. In many places the trapp is changed for serpentine, of a pleasant green colour, as at Sludina-kup'ska, where a beautiful serpentine, sprinkled with copper-pyrites, spotted with yellow and black, and capable of a fine polish, is found in abundance.

From Svetnavolok the mountains proceed farther to the north, at first bold, then gently, as far as the parts adjacent to the lake Pell; thence pursuing their course to the lakes Ust

and Tor, and are covered with huge masses of granite, quartz, and hornstein; at Ufnokontza, and about the Kuman lake, there rises a talcky micaceous schistus out of the trapp. These mountains reach to a considerable height at Moselka, and again toward the west resign the highest place to the granite. From the Kuman lake the trapp-mountains run, with fewer changes, westward about the lake Vyg, to Sondala, and terminate in a direction almost due north, at the western bank of the river Vyg, near the gold mines of Voytz.

About Sondala, particularly towards the east, the mountains rise to a considerable elevation, and contain, as their chief mineral substance, a stratum of quartz somewhat mixed with clay. However, they only rise singly, as the foot around is entirely covered with morasses or lakes. In some are perpendicular veins of quartz, with galena, some copper-pyrites, black sparry lead-ore, markasite, sulphur-pyrites, and ochre. In other of the like clefts appear also blue copper-ore, great nodules of copper-pyrites, spar, and quartz crystals; in others again pitch-ore of copper, vitreous copper-ore, crystallized blue copper, specular iron-ore, &c.

The Bear islands in the White-sea consist partly of granite, and partly also of trapp. The

granite bears a reddish feldspar, quartz, and every where but little hornblende. The veins of lead that have been here explored extend, as I am told, in the granite.

The russian share of Finland is throughout a mountainous country. Towards the north it contains a number of granite mountains, and enormous blocks of the same quality. But more to the south, and chiefly in the region of the Ladoga lake, are numbers of chalk-stone, marl, sand, and slate mountains. In some, specimens of copper and lead have been brought out; iron-ore abounds, not only in the government of Olonetz, but also in those of Vyborg and Archangel.

In general it appears from what has been said, that the main ridges, or the greatest elevations of these mountains, come from Sweden; and extend partly from west to east, beyond the northern coasts of the Baltic, and the lakes of Ladoga and Onega, towards and through the White Sea, but partly hold their course out of Lapland too, from the north to the south. For better distinction, (as the name Northern is too general,) we might more properly style these the Lapland mountains. From their outward form, it is clearly manifest that they have undergone very violent revolutions; as they appear,

for the most part, extremely broken and incomplete. Their figure is very frequently sharp and prominent; but their height, on the whole, very moderate; though there are many, especially in Lapland, that are never entirely divested of their snow. The higher, namely the principal mountains of these parts, consist of granite, trapp, hornslate, gneiss, and flaky chalkstone, and probably likewise of porphyry and serpentine-wake. About the Onega and Ladoga lakes, in the southern part of Finland, &c. many of the mountains consist merely of thick, not unfrequently red-spotted chalkstone. It is a circumstance peculiar to these parts, that in the morasses, bogs, and low-grounds, they contain an extraordinary quantity of granite blocks, frequently of a prodigious size. It was from this place that the great rock on which the statue of Peter I. at St. Petersburg stands was fetched. The whole of this mountainous country is uncommonly abundant in water, being as it were overstrewn with lakes, rivers, cataracts, brooks, and marshes. In the Baltic and the gulf of Finland, in the Ladoga and the Onega lakes, and in the White-sea, an innumerable multitude of islands appear. — The interior mineral quality of all these mountains, as appears from what has been said above, has not hitherto been found

to be remarkably rich, and what gold, silver, copper, and lead courses have been explored in them, were presently exhausted. Iron, alone, they still contain in great quantities, and this, for which there are works in many places, is, if we except marble, granite, some window-mica, and a little labrador spar, sometimes found in the blocks of granite, all that is now got from these mountains.

Besides several rivers, which, like the Neva, mostly take their origin from the lakes hereabouts, not any large river originates from these mountains ; though the vast lakes of Ladoga and Onega, and a multitude of inferior note, are in their neighbourhood.

Many of the mountains are bare ; but the greater part of them, and particularly the vallies and lowlands, are clothed with forests. The kinds of trees here are mostly the black pine, the birch, the common fir, and the larch. The forests in the parts about the Onega lake are of very great extent. — The generality of the vallies and lowlands contiguous to these mountains are of a black bog-mould, others of well-sand, but some are fertile enough, and decked with fine meadows, where the breeding of cattle is the principal source of maintenance to the inhabitants. In Lapland, and in some other northern districts, wood succeeds but badly, and
most

most of the vallies are overgrown with moss, which is a welcome fodder to the numerous rein-deer of these parts. In the northern situations the vallies are by no means rich in plants; yet many of the low grounds are amply stored with berries and a variety of mushrooms. But, on the other hand, these countries abound in wild animals and an inconceivable quantity of both land and water fowl of various denominations.

2. *The Valday mountains.*

These mountains, whose ridges we travel over in going from Petersburg to Mosco, are probably but a continuation of the Lapland mountains already described. They were known to the antient geographers by the name of Mons Alaunus. At present they are indifferently called Vhisokaya Ploftchade, high rising ground, or the mountains of Valday, from the town and the lake Valday which are situated on their tops.

At no greater distance than 10 versts from St. Petersburg, on the Mosco road, we already see great quantities of masses of granite strewed over the fields around, on which the feldspar is almost entirely effaced*. The soil is at first, and as far as 20 versts, mere moor ground. At Slo-

* *Verwilttert.*

venka, 22 versts from St. Petersburg, we first meet with some clay-hills. Farther on, the country again becomes swampy and sandy; but at the same time strewn with vast numbers of blocks of granite, some of them enormously large. Among these masses are also large blocks, with radiated and lamellated schorl. Till we get upwards of 100 versts from the residence, the country is every where low, and we travel through almost one continued forest; but now it becomes somewhat higher, and the soil more clayey. We likewise come to several villages. Large granite rocks are here particularly numerous. Having again passed several great morasses, we reach Novgorod, in a country thronged with hills of marl, sand, and clay. The well-sand, whereof a great part of the way already past consists, is in many places of a reddish hue, and every where mixed with many granite, quartz, and chalkstones. To the right of the great high road, and southward from Novgorod, lies the Ilmen lake, in the parts adjacent to which are many chalkstone-beds, with bridges over them, petrifications, and salt-springs. The last-mentioned are at Mshaga, Saltzvecksha, Ouglenka, and Staraia-Russa. On leaving the last of these towns, we have the Seliger lake and the sources of the Volga in the south-east. We cross the
river

river Lovat, and proceed along the Pola, as far as the mouth of the impetuous river Ivan. Here, about the Ilmen lake, and in nearly the shape of a crescent, arise the Flotz hills, which gradually, on the Shelon beyond Saltzi, on the Lovat, about 20 versts below Cholm, on the Msta at Belkoi-volost, and on the Siaes at Tichvin, increase to a very eminent mountain-ridge. Below the mouth of the Ivan or Javan, along which the stoney stratum, as about the sources of the Siaes, is the highest and the steepest, flows the Pola for several versts over a bed of marl and sand slate. At this place there is a great deal of potter's clay, of which all kinds of earthen vessels for common uses are made.

Following the Mosco road from Novgorod, across the mountains, to the distance of 30 versts farther, we have a hilly ground, partly of sand and partly of clay, to pass over, on which the blocks of granite, quartz, and sand-stone are very numerous, and of considerable bulk. About Novgorod the earth is in some places so loamy and heavy, that great clods of it lie upon the fields, and prevent the coming up of the seed. Near Bronitza, a spacious village on the Msta, lie a great many granite stones, some whereof are extremely large; especially those that one sees on a pretty high hill, on which there stands a church.

The

The largest lie mostly on the north declivity of the hill. On a particular spot, upon the shore of the Msta, there is a bed of quartz-sand at least three arshines in depth, under which runs a layer of clay. Hence to Bolotnitsa the ground is still much more hilly, and the granite blocks more numerous. Among these there are also many pieces of jasper, trapp, and quartz. From this village to the town of Valday is a distance of 44 versts. Nothing is seen here but great hills covered with sand, and frequent masses of granite. On these hills, where, however, we never once saw the naked granite pushing upwards, the granites are of a variety quite peculiar. They are found from the finest grain, up to blocks of very large dimensions, and of red, grey, bluish and blackish colours. Sometimes the quartz, then the feldspar, one while the horn-blende, at another mica, and at another a fine needle-shaped schorl, has the ascendant. Together with the granite there is also found much quartz, some porphyry and jasper, and pieces of schneidestein, or steatites. Of the latter sort Mr. Hermann found, among others at the village Votskoy, about 324 versts from Peterburg, a large block (not rounded off) of upwards of 100 pood in weight, having many within-lying brown spiculæ of schorl and small transparent red-brown granites. The

country

country about Valday, being the highest point of the mountain, is extremely pleasant. Fine, slow-rising hills, a charming pellucid lake, with an island on which stands a noble monastery, delightful groves, an extensive scenery, forming the most inviting variety. One scarcely thinks himself on the mountain, and is almost inclined to take this region for a kind of plateaux, so gently do the mountains raise their heads.

At a few versts from Valday the road begins to decline very fast. The granite blocks on the mountains covered with sand and clay, are still in great numbers, but by far not so large as on the opposite side. There even already appear a good many petrifications in chalk and flints. The latter are frequently of the jasper kind. — Towards Vishnei Volotshok the road goes again over little hills, swampy and well-sandy ground. On many plots, and even till within 20 versts of Vishnei Volotshok, there is a multitude, and some of them very large blocks of granite. Several of the well-sand hills contain lumps of granite, quartz, sandstone, limestone, and flints, all together, in great numbers. It is remarkable, that we here meet with many blocks of sandstone, while they are very rarely to be seen on the north-west side of the mountain. — Between Vishnei Volotshok, and especially in the district
of

of Nicoliskoi monastir, the country is plentifully strewn with petrifications in firestone and chalkstone. Among them are found echinite-stalks that are transformed into carnelian.

Between Torshok and Tver the country is flat, and the quality of the soil much like that above described. They use here for buildings a sort of white marly stone, which contains great quantities of broken shells, and solitary ammonites petrified into chalkstone. On the other side Tver the firestones are far less common on the surface. About Klin we find again several clay-hills, in which stick large blocks of granite and sandstone; also firestone, with and without petrifications, and pebbles of chalcedony. From Klin to Mosco the soil is very clayey, but always mixed with some blocks of granite. The region about Mosco offers great abundance of beautiful petrifications, and especially of pyritical ammonitæ into pyrites, prettily embellished with mica of a metallic lustre. Along the Vachusa, by the Volga, we see myriads of pebbles of all sorts of colours; and farther on, in the district between Mosco, Kaluga, Smolensk, &c. much chalkstone inclosing great quantities of shells of various species.

The highest point of this ridge of mountains is, therefore, Valday. It shapes its course hither from the north, and appears to take its departure

• ture

ture from between the lakes Ladoga and Onega. It then stretches across the Msta, runs between the Ilmen lake and the Seliger, and extends its foot as far as into the governments of Smolensk, Orel, and Novgorod-Severski. About its western, southern, and eastern declivities, are several strong strata of chalk and marl, which farther on are lost in marshy and sandy plains.

Some naturalists are of opinion that the whole of this Valday chain of mountains is the effect of violent inundations, and that it entirely consists of a chalkstone arisen from crumbled and destroyed marine productions. Highly possible as this conjecture is, it may be no less likely that the middle part is a primitive mountain, having granite for its principal stratum, which, through length of time, and perhaps even under water, is so much decayed as to be in a manner smoothed; for, as far as I know, no chalkpit has yet been opened on its summit; and how much soever some blocks of granite on these mountains are rounded off, yet we see a great many that are so but in a small degree. But even if all these masses were rounded, it would still be no proof that they were all brought hither by the flood. Of those by Bronitzza in particular, this would be extremely difficult to believe. I therefore take all these elevations, till some very solid

solid reasons shall convince me to the contrary, to be an original mountain decayed and destroyed in its surface, on which, round about its declivities, the loose chalk and marl was floated or deposited.

Notwithstanding so much is to be said concerning the mineral quality of these mountains, no mine has as yet been explored among them. Some specimens indeed, it is said, have been brought up of copper and lead; but the attempt has been prosecuted no farther. There is plenty of iron; especially at Poterpelitz, where it seems that a bed of pyrites by accident taking fire, it left large pits, and deep cavities in the earth, which afterwards filled with water, and are now little lakes abounding in fish. The heat of the fire, however, must needs have been very violent, as the martial parts of the pyrites were perfectly in fusion, and flowed together into ironstone, partly porous, partly solid, without having left behind any ejections, or other signs of this tremendous phænomenon, a burning mountain. It is more certain that the bottom of all the lakes is of this confluent ironstone. The beds on the Msta contain a great quantity of sulphur-pyrites, vitriolic earth, alum, coals, iron-ore, petrifications, &c. The pyrites are found, of every known figure, and of excellent lustre. A

bed of coal stretches principally about Borovitsk; and salt-sources, chalk-pits, and gypsum, are found in Stara-Russa.

The extreme elevation of the Valday mountains is but very moderate; as the highest point is scarcely 200 fathoms above the level of St. Petersburg. Upon them are not only the Valday-lakes, but also some others of inferior note; and at its western foot, is the great lake Ilmen, at the southern, the Seliger, &c. Of the rivers, some take their origin from the mountains, others from the lakes that lie at their foot: the Volga, the Duna, the Volkhof, the Lovat, the Pola, the Tshagedo, the Kolp, the Dniepr, the Don, the Oka, &c.

These mountains are but sparingly clothed with forests, but so much the more with beautiful meadows and fields; hence the grazier's trade is here carried on with considerable profit. The species of wood are, the several sorts of pines and firs, the birch, the linden, the aspin, the alder, &c. The soil in the vallies mostly consists of clay and marl, and is in general fertile.

3. *The mountains of Taurida.*

The peninsula of Krim, from the neck of land where the fortress of Perekop stands, is all a flat, which gradually becomes higher, till at last it rises into

into lofty mountains, which form the southern side of it, and the shore of the Euxine sea. The range of mountains extends from Theodosia in a straight line westwards, quite up to Balbek. At Karafubafar two towering pinnacles shoot up, and at Akmetchet a very lofty one, which is called Ak-tau. The smaller mountains stand distinct and scattered. It is extremely probable, that this range is partly a continuation of the caucasian, and partly of the carpathian mountains; and that these two principal chains are connected by it; which also seems apparent from the nature and quality of the mountains opposite to those of Taurida, which extend beyond the Danube, through Bulgaria, and are called Pulkanian.

The component parts of the mountains of Taurida are as yet but little known. Thus much is certain, that the greater part consists of chalk-masses with petrifications, and many beds of sand and marl, and chalk-hills with flints. It is therefore to be presumed, that in general they are not to be classed with the original, but only with the alluvial or deposited mountains. A part of them are thought to owe their origin even to the subterranean fires. However this be, it is said that lead, copper, and iron ores are found in them, as well as jasper, agate, and mountain crystal. In limestone, marble, slate, sandstone,

K 2

coals,

coals, naphtha, and common salt, they are very rich. — The isle Taman consists merely of beds of sand and marl, without limestone.

Their height, in comparison with other chief mountains, is but moderate. They are in a great measure destitute of forests. The trees that grow upon them are those of the richest foliage, such as oaks, beech, chestnuts, &c. However what they are deficient in wood, is amply made up for by the rich and beautiful herbs of the vallies.

The rivers that take their rise from the mountains of Taurida are, the Alma, the Katscha, the Kabarda, the Salgyr, the Karassu, and a great number of little streams that in many places form very pleasing natural cascades.

4. *The Caucasian mountains.*

The caucasian mountains, as far as they have hitherto been explored on the russian side, are truly an alpine range, extending, between the Euxine and the Caspian, from west to east, in length about 350 english miles, and towards the north and south in a level country all around. They greatly decline as they approach both the seas. The whole range has a tract of about five miles in breadth, where the chain is at its greatest height, which is covered with eternal ice. Its
breadth

breadth on the northern declivity extends at most to 50 miles, and runs along on the prodigious northern plain, which, taken in the quadrature, measures 1000 english miles, being bounded on the east by the fiberian, and on the west by the valakhian mountains. The icy ridges, as well as the others, at their highest points, consist mostly of granite, the sides leaning towards the next mountains of all kinds of slate, and the outward sides of limestone, &c. This limestone mountain runs in a flat clayey field of 20 miles in breadth, gradually declining, till it ends in a promontory 10 miles broad, which consists almost entirely of sandstone; and this again runs out afresh in a clayey plain about 8 miles broad, in which likewise numerous sandstone-hills arise. In this plain common salt and natron are met with in great abundance. In the promontory are ironstone, sulphur-pyrites, vitriol, petroleum, and warm baths not unfrequent; petrifications are likewise found here, though not in great numbers, mostly in flint. Specimens of lead and copper are rarely seen in the promontory, but in the higher mountains frequently. The slate contains alum. A piece of this caucasian ridge is said to have no waving mountains at its northern termination. As to what regards the quality of its superior regions, it is to be remarked, that the river Hippius in Iberia bears gold, the mountains

in that region are said to be very rich in minerals, and that the gold mines at Cumana were already worked by the Romans ; that the mountains on the Kura, and especially in the district of Azghur likewise contain very rich ores ; that in the plains of that river are found fine marble, coal, and warm springs ; in the mountains by the Terek, as far as the village Stephantzmina, there is lead, silver, and iron ore ; in the georgian province Somghetia, rich silver and iron ore, marble, and jasper ; in the circle of Quoetsh copper-ore ; in the principality of Tamblut rich lead, silver, and gold mines ; in the principality of Lori considerable copper-mines, good millstones ; in the principality of Unfular rich copper-mines ; in the parts about Akdale, gold, silver, and copper, and in the province of Albania, marble and alabaster, iron, warm baths, petroleum, and rock salt.

Hence it appears, that the caucasian chain of mountains is a main course, in its highest points covered with ice-mounts ; that it has its highest, high, middle, and fore-mountains, or promontories, the risings nearest to the level of the plain ; that its sides are very rich in minerals, and probably, in those parts which are now added to the russian empire, contain a treasure of the precious metals. Its eminence, on the whole, is considerable, and many of the rocky parts very steep and prominent. In many of its extremely fertile vales

vales it is furnished with charming woods, consisting of excellent forest-trees of various kinds. — On the russian side of these mountains, the rivers Terek, Kuban, Kumma, and a number of smaller streams, take their rise.

For rendering this account as complete as possible, I will here subjoin a few particulars from what Guldenstædt says of Caucasus. “ The
 “ main mountain,” says he, “ or rather the high
 “ ridge of the main mountain, from which the
 “ whole on both sides declines and sinks towards
 “ the seas, consists mostly of snow or ice mounts
 “ of a truly alpine height, which, by reason of
 “ their local elevation, particularly in some open
 “ fissures, contain everlasting snow and ice, gene-
 “ rally exhibit bald rock, without any covering
 “ of earth or plants and trees, and in some parts
 “ pierce into the clouds. This, which may pro-
 “ perly be called an alpine chain, seems to me
 “ not more than 5 to 7 versts in breadth, and
 “ consists of a granitic stratum. — The two
 “ sides of the high alpine ridge, which form the
 “ main mountain, I take to be, from south to
 “ north, or right across, measured in several
 “ places, on an average, 70 versts. They stand
 “ immediately in the main ridge; and the north
 “ side is visibly steeper or higher than the
 “ southern, as it declines in a far narrower or

“ smaller breadth, or rather only sinks down to-
 “ wards one part. — The highest ridges of
 “ Caucasus consist of granite; close to which,
 “ both on the northern and southern sides, are
 “ mountains of slate, and farther on, chalk-
 “ hills, which terminate in sand-hills. In the
 “ latter are found sulphur, sulphur-pyrites,
 “ warm sulphureous springs, petroleum, rock-
 “ salt sources, nitrous salts, bitter salts, mag-
 “ nesia vitriolata, alum, selenite, &c. — The
 “ northern promontory flattens partly at the
 “ Kuban, and partly over it, and at and across
 “ the Terek, northwards, in the vast, arid,
 “ clayey, sandy, salt, woodless steppe, which
 “ towards the Manyth is called the kuban, and
 “ towards the Kumma the kummanian steppe,
 “ and occupies the space between the inferior
 “ Don and the inferior Volga. — In the north-
 “ ern track of slate, appears ceruse of lead, which
 “ contain silver, and copper pyrites in slaty strata,
 “ in courses of quartz and spar, in various veins,
 “ particularly four in the province of Kisteri in
 “ the district of Galgai, on the river Assai, be-
 “ tween the villages Osai and Cheirechi. Courses
 “ of bleyglantz are seen also above, on the Te-
 “ rek, in the georgian district of Kovi, in the
 “ district of the old fortress Dariella. Other
 “ lead-ores are found on the river Pog, by the
 “ brook

“ brook Tshidshei, near the villages Tshlmeti and
 “ Tsharkau, on the right side of the Aradan, of
 “ the Terek, in the district of Dugor, near the
 “ village Nakatza — The slaty mountain near
 “ the Affai, is very rich in ores, especially about
 “ the head of the Archoun, the Sundsha, the
 “ Kifil, the Pfol, and the Aredon. About the
 “ Terek, it yields also copper and alum. Iron-
 “ stone abounds in many parts of these moun-
 “ tains. — From all this we may safely con-
 “ clude, that mining might be begun and car-
 “ ried on in the northern Caucasus to great
 “ advantage, especially for Russia; only care
 “ must first be taken to establish strong and
 “ well-garrisoned forts for the protection of the
 “ miners against the ravages of the thievish
 “ tribes that inhabit the mountains, till they
 “ have attained to a greater degree of civilis-
 “ ation, and even themselves take a turn for
 “ mining *.”

5. *The Ural mountains.*

- This famous chain of mountains, which forms
 the natural boundary between Europe and north-
 ern Asia, is commonly called the Ural, or the belt,
 as if it girted the whole world. The ancients gave

* See Guldensædt, reise, theil i. s. 433, & seqq.

this chain the appellation of the hyperborean and the ryphean mountains, and sometimes Montes Rhyrnici. Under the last of these denominations the bashkirian Ural was more particularly designed. — The northern Ural they termed Montes Hyperboræos, or Riphæos, and the southern Rhyrnicios. The former were afterwards also called the Yugorian mountains. Ural is a tartarian word, signifying a belt or girdle, by which the Russians likewise denote this range; for they call it Kammenoi and Semnoi poyas, that is, the Rock or Earth-girdle. These mountains extend, from south to north, almost in a direct line, greatly above 1500 english miles. The mountains between the Caspian and the lake Aral may be considered as their commencement, which attain their greatest height and bulk about the sources of the rivers Ural, Tobol, and Emba; from thence stretch on towards the origin of the Tshuffovaia and the Isets, and farther on to the sources of the Petshora and the Sofva; lastly, form two great promontories about the karian haven of the frozen ocean; and after being divided by the straits of Weygat, reach their termination in the mountains of Novaia Zemlia. Such is the main course of this prodigious chain, which issues from the higher asiatic mountains, is gradually

dually lowered, with several frequently imperceptible interruptions, and lastly sinks in the frozen ocean. — Some considerable collateral branches take a western as well as an eastern course from it. The most material that extend from the former side are those called Obschtschei-Sirt, the mounts of separation, which run out between the river Ural and the Sakmara, and on one side unites with an arm coming out of the kirghiftzi steppe on the left shore of the Ural; on the other side projects into the old kalmuc steppe between the Volga and the Ural, and northerly is in conjunction with the sandstone mountains which accompany the main course of the Ural on the western side. — Near the forts of Orsk and Guberlinsk, a part of the mountains run out south-eastward into the kirghiftzi deserts, and reach to the mountain Ulutau which stands about the centre of that region, and is attached to the great Altay. This arm, extending near the abovementioned forts towards the south-east, is called the Guberlinskoi mountains. — Another course, smaller than the foregoing, runs south-eastward between the rivers Ural and Ui, under the name of Okto Karagai, through the open steppe of the middle horde of the Kirghis-kaifaks, and then pursues its way,
under

under the appellation of Alginiskoi-Sirt, towards the Irtish and the Altay mountains.

The whole Ural chain may be aptly divided into three main parts: 1. The kirghistzi Ural, which extends from the Caspian and the Aral, and eastward out of the great steppe of the Kirghis-kaifaks, as far as the origin of the Tobol and the Yemba. 2. The Ural rich in ores, properly implying the Ural ore-mountains, which takes in the whole mountainous track, with its western and eastern appendages, from the rise of the said rivers and the Guberlinskoi mountains, quite up to the sources of the Solva and Kolva; and 3. the desert Ural, extending from these rivers to the frozen ocean. The Ural that abounds in ores may be again subdivided into the orenburg, the ekatarinenburg, and the verchoturian Ural.

This main course of the Ural mountains has one peculiarity, that it declines incomparably more on its western side than on the eastern, and on the former is accompanied by a considerable track of collateral ridge, very rich in copper, and consisting for the most part in schistose sandstone.

The highest mountain of the Ural chain is in the Bashkirey, (or in the orenburg Ural,) and
in

in verchoturian Ural. Yet the former far exceeds the latter. They are mostly met on the side of the range inclining to the west ; as, for instance, the Iramel, Psetak, Taganai, Dshigalgo, Agehurdyk, Imen or Yamontau, &c. But likewise on the east side are some very lofty heads ; for example, the Irentik and Karantash, from which latter the river Ural takes its birth. In verchoturian Ural the greatest elevations are the Vostroi-kammen, the Konkeshefskoi-kammen on the Lobva, and the Pavdinskoi and the Kosvinskoi-kammen on the Tauda. Some of them, as the Agehurdyk, the Dshigalgo, the Taganai, the Komkeshefskoi, Pavdinskoi, and Kosvinskoi kammen, are in several places covered with eternal snow. The ekatarinenburg Ural contains the easiest mountains, thrusting up their summits for the most part only in hemispheres of greater or smaller dimensions.

The kirghizti Ural is almost entirely unknown to us ; and we are not much more acquainted with the great desert Ural. However, it is thought the latter goes on increasing mostly northwards, over the source of the Sofva, and at last stretches, almost parallel with the Obý, towards the frozen ocean ; where it sends out a branch of schistous mountains to the westward, which, with another neck of land, forms a bay

in the Oby, terminating as if shattered to pieces; with a part of the same schistous quality, on the coast; but running on with its strongest part to Novaia Zemlia, and perhaps issues also a branch westward through the lake, which is full of rocky islands, quite to the lapland mountains.

The Ural chain is of itself a main mountain, whose highest ridges, for the most part, consist of granite, and of all the properly primitive rocky materials; the sides being more of schistus and wakes; the fore-mounts, or promontories, especially on the western side, of sandstone, chalk, and gypsum, and the beds of marl, clay, sand, &c. But this statement admits of several exceptions. Thus, for instance, we see that the granite pushes upwards not only in the highest, but also in very low points; that on the high ridges, together with the granite-knobs, there are likewise in many places porphyry, gneiss, mica spathosa, verd, serpentine, sand, and marlstone, micaceous schistus, and lapis calcareous salinus, which frequently seem to be laid on the granite, but often only placed beside it; and that in the fore-mounts and beds, chalkstone, schistus, sandstone, and gypsum, are so interchanged, that it is impossible to say which of these properly serves as the suppositum to the other. — The orcnburg Ural has whole knobs of
of

of solid horny quartz, and many mountains of extensive compass; for example, the Guberlinskoi, which almost entirely consist of fine jasper. The schistose track, or what is called the mountain-gangue, is not much more plainly perceivable on the eastern side of the principal ridge, than on the western, where it seems almost entirely to fail. Gneiss, micaceous schistus, pot-stone*, grey marl, and serpentine wake, grey clay schistus, trapp, and jasper, interchange without any apparent regularity, and are variously interrupted by protruding lapis calcareus salinus. The case is just the same in the eastern sub-mountains, with the thick and broken (mostly free from petrifications) chalkstone, gypsum, black schistus and sandstone, beds of marl and clay, &c. the succession whereof are different in almost every region. — On the west side succeed, mostly close by the high mountain, a grey and black clay schistus interchangeably with fine sandstone; and a powerful mountain, extending from the Belaie northwards over Solykamsk, of thick chalkstone, which forms in many places very high and broken mounts, and westwards is accompanied in its whole length by hills of gypsum and sandstone, in the former whereof rich salt-springs, and in the latter very productive beds of copper, lie concealed. Where

* Or, *Lapis ollaris*.

this chalk-mount borders on the higher mountain, numerous and large nests of iron-ore are every where met with. Whereas on the east side, and on the ridges of the mountain, the richest copper and many iron ores break in the parting of the saline chalkstone with marl-wake, the most powerful couches of iron-ore, of porphyry, and the gold-ore in the gneifs.

In minerals the Ural mountains are very rich. We find beautiful sorts of granite, porphyry, excellent jasper, fine quartz, petrosilex, pebbles, whet-stones, flints, agates, chalcedonies, large mountain crystals, smoky topazes*, fine amethysts, chrysolites, porcelain and pipe-clay, bolus, shelly feldspar, serpentine, pot-stone, window-micæ, asbestos, and amianthus; beautiful marbles, table schistus, gypsum, flowers of spar, turf, coals, mineral oils, naphtha, native sulphur, markasites; fossil salts, sources of common salt, bitter lakes, alum, vitriolic earths, saltpetre, natron; iron, copper, gold, and specimens of silver and lead. For working of the gold, copper, and iron, very extensive and productive fabrics are here erected.

The Ural mountains are also very amply endowed with woods. Their trees consist of the several sorts of pines, birch, fir, cedar, larch, aspin, alder; and on the south-western side a few oaks, elms, lindens, &c.

* Smoky topazes, mean brown rock crystals.

In the vallies adjoining to this range of mountains we every where meet with rich and verdant glens and dales and meads in alternate succession; accordingly the breed of cattle is not inconsiderable. Of wild beasts and birds they contain great plenty. Among them may be reckoned fables, beavers, rein-deer, elks, &c.

In the ordinary course of years they abound in waters; and the various elevations are copiously supplied with beautiful pellucid lakes, ponds, and numberless streams, all teeming with fish. The principal rivers that here take their rise are: the Sofva, the Tura, the Isset, the Ui, the Tobol, the Yemba, the Ural, the Belaia, the Tshuffovaia, the Kamma, the Petshora, &c.

6. *The Altay mountains.*

The mountains which, on russian ground, belong to the system of the high rocky ridges of Altay, take up the whole breadth between the Irtysh and the Yenissey. They terminate, or rather depart from that mighty chain of mountains, which, as far as is hitherto known, stretch, in a south-eastern direction, from the fortress of Sempalat on the Irtysh, unite beyond the Yenissey, with the sayane and baicalian, and in Dauria with the argunian or nertshinskian mountains; and thus fix the limits between

Siberia and the chinese empire from the Irtysh to the Amoor.

The Altay mountains are called by the Chinese, Altai-alin, and Ghin-shall, which signifies the Gold Mount. They are divided into the great and the lesser Altay. The great Altay separates the mongolian Tartary from the empire of the soongorian Kalmucs and a small part of Bukharia toward the west. This range proceeds in various windings toward the north-north-east, here throws out several considerable ridges, between which the main sources of the Yenissey, the Oby and the Irtysh rise, through Soongoria to the north-north-west, where they enter in conjunction with the lesser Altay. The lesser Altay parts Soongoria from the government of Kolhyvan, through which the aforesaid streams pursue their course over a great extent of country.

The greatest height of these mountains is without the limits of the russian territory. They run out in general from one of the highest points, known by the name of Bogdo, over the sources of the Irtysh, north-westward between that and the lake Teletzkoï-ozero, and by this lake and the Yenissey north-eastward into the russian empire. The whole of the russian share of the Altay mountains, therefore, naturally falls into two great halves. One of which compre-

hends the entire space between the Irtysh and the Bii *; and the other, the space between the Oby and the Yenissey. For the sake of more accurate intelligibility, the former is styled the kolhyvan, and the latter the kufnetzkoi mountains. Both include the greater part of the government of Kolhyvan, and belong entirely to the department of the kolhyvano-voikresenskoi mine-works. The former half, namely, the mountains between the Irtysh and the Bii, or Oby, might, on account of its mineral wealth already known, be styled by way of eminence, the Altaian ore-mountains.

Of all the mountains in the central Asia, those of Altay seem the mightiest, the most extensive, and the most conjoined. They do not, however, throughout bear the name of Altay. The lofty track which parts the government of Kolhyvan from the chinese Soongoria divides into two great joints. One from the Irtysh to the lake Teletzkoe and the head of the Abakan, is properly the lesser Altay, or Chrebet Chalta; the other, from the Abakan to the Yenissey, is called Sabinskoy Chrebet. In the former are the greatest elevations of the kolhyvanian, and in the latter those of the kufnetzkian moun-

* Farther on the Obv.

tains; they therefore form the basis of all the ribs or mountain-tracks that shoot out from it to the north-west and to the north, which at last lose themselves towards the Frozen-ocean in prodigious plains; while towards the south, as it appears, they still continue to soar to an uncommon height over a long and broad extent of territory.

Right in the midst of these tall mountains, says Dr. Pallas, and on the frontier line between the soongorian and mongolian deserts, Bogdo-Dola, or Bogdo-Alim (the almighty mount), so eminently famous amongst all these nations, lifts its pointed heads; which, if not one of the highest, is yet, by its craggy, steep, and irregular form, with all the appearance of having been thrown up by some violent agitation of the earth, the most striking of all the powerful mountains of these parts. North-westward from it, all the main mountain as far as Altain-Kul, or Teletzkoe-ozero, is called the **Golden Mountain**. Eastwards towards Mongoley, more to the south, runs a strong mountain Changay, and southwards a powerful snow mountain Massart, which either annexes to the tybetan, or to the northernly mountains in India. Lastly, westwards the main mountain throws out an arm, mostly bare of forests, and all over as if studded with

with rocks, called Allakoola, i. e. the Checquered Mountain, by the Tartars Ala-Tau, which connects with the kirghistzian Alginskoi-Sirt. Between the Muffart and the Alak arise the rivers Sir, or Shir, and Tallas, which flow to the lake Aral, northwards out of the Arakoola the Ili rolling its waters to the Balkash-noor, the Emil and the Tshui, which is sometimes dry; and north-westward from the Bogdo the upper Irtysh takes its source. — Probably the great Altay mountains concatenate with the tybetan mountains by the Muffart, and perhaps by other chains. For all the deserts between Siberia and India, and the eastern Bukharia, are nothing but alternate hills and plains, and extremely rocky. That also the Altay mountains must make an uninterrupted partition between the western steppes and the eastern regions, is shewn by the steppe-animals, particularly the antelopes or steppe-goats, who shun the mountains, and even in Asia go no farther than to the western range of the Altaï, and are come from it northwards to the woody regions that accompany the Oby. — The snow-mountain, which appears northwards on the siberian frontiers from the Irtysh-tau between the Buktarma and the Katunia, and quite into the angle formed by the rivers Ina and Belaia which flow into the Tsharysh, is, as it

were a division, a short branch, a nook of the great Altai, which by some is usually called the little Altay, and which darts its stupendous pinnacles above the clouds. It rises every where bold and steep, and stands (especially in the vale where the Ina unites with the Tigerek) like a towering wall, behind which the mountains rise constantly higher in irregular gradations, and at last strike up in separate points. The same steep vale there parts the schistose mountain from the chalk-stone mountain, which hence spreads northwards between the Ina and the Loktefka quite to the Tsharysh. Over the schistose mountain the snowy summits rise conically out of a granite mixed with schorl and mica. The same granite shews itself again in chalky promontories, with the schistus lying on it; and forms the Revnovaia Sopka, as it is called, at the same time, right in the bosom of the chalky mountains, the still loftier Sinaia Sopka. Granite appears likewise throughout in low, rocky, craggy mounts and single cliffs, between the rivers Ubo and Alay, where the mountain has already fallen deep towards the plain, and likewise about the lake Kolhyvan. The rich ore-mountain of Kolhyvan places itself immediately between and about this granite-stock; and thence arises an apparent confusion in the strata
through

through the whole of the Kolhyvan ore-mountain. On the Irtysh the schist-mountain extends latitudinally as far as Semipalatnaia. The wavy red sand schist ridges between the Shulba and the Ufa, seem to rest upon the schist. Between the Alay and the mountains stretching to the Irtysh, is also a perfect plain, without a trace of hilly scites, with many salt-pools and petty lakes, and the promontories every where gently decline towards this plain, and are completely destitute of forests. Genuine hornschist and jasper are here not to be found in the whole mountain, neither, except the outermost hills that proceed by the Irtysh below Semipalatnaia, is any true floets mountain perceptible.

The principal part of the Altay mountains that fall to the share of Russia, is the range of Kolhyvan, or the proper ore-mountains of Altay. For the more convenient comprehension of it, it may be reduced to the following subdivisions, namely: 1. The Kolhyvano-voskresenskoi. 2. The Korbolikinskoi. 3. The Alaiskoi. 4. The Ubinskoi. 5. The Buktarminskoi. 6. The Telekoi; and, 7. The Tshariskoi mountains.

The KOLHYVANO-VOSKRESENSKOI mountains have their appellation from the adjacent lake Kolhyvan, (which has given its name to the whole chain between the Irtysh and the Oby, as

as to the government,) and from the first copper-mine, called Volkresenskoi. It is bounded on the south by the granitic ridge which parts this mountain from the korbolikinskoi. It is confined to the east by the deep valley in which the line of the present fore-ports is drawn, and by the lofty tigeretzkoi snow-mountains; and bounded on the north by the river Tsharysh, whose course is accompanied by considerably high schist and chalk mountains; towards the west it loses itself in the north-western steppe. — The greatest elevation of these mountains is the Sinnaia-Sopka*, which is computed to ascend 2814 parisian feet above the level of the sea. At its middle and greatest height it consists of a mostly coarse granite, consisting of spatum campestre, quartz, and blackish micæ. On the north-side it abuts extremely steep against the Bielo lake, under which appear leafy clay and table-schist which rest upon the foot of the blue mountain, and covers the granite between it and the tigeretzkoi granatic snow-mountain; still 30 versts farther to the east. On the east side it in like manner struts boldly against the great Biela, and more to the west, in the angle formed by the little Biela with the great Biela. In this angle, at the foot of the Blue mountain,

* The Blue mountain.

is found schistus and chalk-stone, in which latter are some little cavities containing lapis calcareus stalactites. From the little Biela the mountains rise again towards the south, elevating themselves to the Revennaia Sopka, or Rhapontic summit, which is surrounded by the ore-mountains, and consisting of schistus corneus, mixed sparingly with mica spathosa and crumbs of mica campestris, in which latter are a few small hollows wherein are found stalactites. Towards the west, from the blue mountain, runs the granite-mountain range, in bulk from 15 to 30 versts, interrupted by a multitude of vallies, proceeding 100 versts to the Alay, and there unites with the alaiskoi granite hills. The northern foot of this granite-ridge runs under powerful schistus and chalk mountains, in and between which the two first kolhyvan mines were dug.

Another mighty ridge of granite runs from the Blue mountain northwards to the river Tsharysh, under-run on the western side by schistus and chalk which again farther on extend to the yaroffkoi and the tigeretzkoï snow-mountain. The component parts of all these granite-ridges, are various; one while the feldspar, another time the quartz has the ascendant; now the component parts are coarse, and then so delicate, and so poor in micæ, that one might be

be induced to take the granite proceeding from them for sandstone.

This tract of mountains is uncommonly rich in silvery, copper, and zink ores ; for in this tract lie the old and first Voskresenskoi, and Kolhyvaniikoi, Golovinskoi, Bogoyavlenskoi, Bobrovnikofskoi, Kleopinskoi, Guskashinskoi, Medvedefskoi, Loktofskoi, Berosofskoi, Murfinskoi, Monastirskoi, and Tshakyrskoi mines, of which, however, scarcely any are in work at present.

The KORBOLIKINSKOI mountain has its name from the brook Korbolikha, which runs through it. It is inclosed from the south, the east, and the west, by granite-mountains ; but on the north-east is bounded by the great Biela, accompanied by schist and chalk mountains. It consists, except in some few points which are covered with sea-bottom-materials, for the most part of clay-schist, marlwake, lapis corneus, and quartz, which here and there are underlaid by granite and porphyry. Notwithstanding the height of these mountains, between the origin of the Korbolicha and the little Biela, is considerable, yet the mountain on the great Biela, such as the Revennaia-Sopka, and the Karaulnaia-Sopka remarkably distinguish themselves on account of their single summits. Its mineral consists of a schistose marlwake and hornschist, wherein here
and

and there hornblend and crumbs of feldspar are to be met with.

The chain of mountains in conjunction with the north-western and south-eastern rivers of the Revennai Sopka, the Blue mountain, and the kolhyvan granite-mountain; and in the south-east, after they have gone about the kliutshetskoi majak, terminate at the foot of high granitic snow-mountains. The Revennaia Sopka is the highest point of these mountains, being estimated at 2213 parisian feet higher than the Shlangenberg; it is said not to consist of granite, but of firm hornschistus. In this torbolikinskoi tract of mountains, the richest of all the Altay mine-works are carried on. For here is the crown of them, the Slangenberg (Smeinogorskoi-Rudnik); and besides that, the Mashinskoi, the Marksheiderkoi, the Karanishetskoi, the Strishkoffkoi, the Matveyeffkoi, the Ttherepanoffkoi, the Kommissarskoi, the Goltzoffkoi, the Ivanoffkoi, the Piktoffkoi, the Lazurskoi, the Haufenkoi, and the Semmenoffkoi mines.

The ALAISKIAN mountains comprise that range which advances from the origin of the Alay to the two sides of this river, and between it and the Ouba and Irtysh, and runs out into the great saline plain, which is skirted by the Alay, the Irtysh, and the Oby. This range, as far as the

the stream Shemanaika, falling into the Ouba, and on the branch of the Alay Talofka, consists almost entirely of granite and porphyry, rises between the Oby and the Irtysh to a very considerable height, and seems to under-run the korboli-kinskian and solotarashian mountains, which, between the Irtysh and the Alay, is properly the fore mountain of the Alaïskian. Together with granite and porphyry here is found also mica and clay-schistus, marlwakes, and saline-chalk stone, on the right of the Alay, (where the granite ridge proceeds down to the Ioktefskoi favode,) trapp and breccia, on the Shulba black schistus, chalk, and sandstone, and farther down gypsum, clay, marl, and beds of sand.

The highest summit of these mountains is mount Sludina in the district of the Alaïskoi-favode, which is calculated to be 1672 feet higher than the Shlangenberg. From this elevation we see the tigeretzskoi and buktarminskoi (or oubinskoi) snow-mountains, as plainly as though they were only a few versts off. The pinnacle of this mountain consists of a granite composed of feldspar, quartz, and black micæ, of pretty coarse grains. In the lower points the component parts are smaller, and instead of the micæ a hornblend takes the ascendant. In some places both are wanting, and the granite assumes a
v
sandstone-

sandstone-like appearance. At its northern foot, four versts from the melting-houses, chalk-stone breaks with marine productions. — In this part of the Altay ore-mountains are the mines Medvedeffkoi, Ploskogorskoi, Shemanishinskoi, Shulbinskoi, Solotukinskoi, Lokteffkoi, &c.

The OUBINSKOI mountains, otherwise called the VOBROFSKOI, form, at the sources of the Ouba and Ulba, a considerable ridge, towering in lofty summits to high snow-mountains, sending out its branches on both sides of those rivers, especially between them, and at its foot is bordered by the Irtysh. The greatest height of it rises near Bobroffkaia with porphyry, which in the north and south is frequently changed for granite, whose summits, one while with gentle, and then with bold ascents, surround the most delightful vales, abounding in odoriferous herbs of various kinds. — In the region about the fortress Oustkamenegorsk, the granite is under-run* by schistose earth, in ancient times explored by the Tshudi, who took pleasure in mining. Higher up the Irtysh, as far as the Bukforma, mountains of schistus frequently appear, in which copper-ore is dug, and which here and there is under-run by porphyry and granite, but in many places are covered with chalk. The mountains in which the sources of

* Unterteuft.

the Ouba rise, consist of granite, porphyry, marlwake, petrosilex, and quartz. Towards the east the ouvinskoi snow-mountains raise their lofty summits, which, measured with the line, were found to be 5691 english feet above the water of the river Ouba which devolves its pleasant stream beneath its monstrous cliffs. In these mountains have been lately found the filiposkoi mines, on the Ulba, which promise great success; together with the mines taloskoi, nicolaefskoi, berefskoi, ilinskoi, &c.

The BUKTARMINSKOI mountain begins in the superior region of the river Buktarma, at the frontier-heights between the chinese and the russian empires, declines from the south towards the north and west, and accompanies the aforementioned stream, on both its sides, till its confluence with the Irtysh. It reaches to east and north-east as far as the mountains that run along the Kokosun, and towards the north up to those that follow the course of the Ulba. From the binskoi snow-mountains up to the head of the Uiman (which falls into the Kokosun) it forms a powerful ridge, rising almost throughout in high summits of snow, and on this side extends its greatest height to the source of the last-mentioned river. This huge mountain, as yet very little known, and partly inaccessible, consists, as far as we know of it, in its highest points of various

various kinds of granite, porphyry, and flint breccia. But in its chasms, and particularly towards the shores of the main or most considerable rivers, different sorts of schistus, chalk-stone, marl, breccia, and sand-stone are frequently met with. Jasper is found in abundance, with porphyry, and trapp, in the superior regions. Of the chalk-mountains seen in the lower confines of the Buktarma, some are very craggy and have a number of caverns. In these mountains there has hitherto been but one mine explored, the Buktormniskoi, with any hope of success.

The TELETZKOI mountain has its name from the lake Teletzkoe, (Teletzkoe ozero,) on one of the greatest eminences of the Altay, and from which the river Oby issues. It forms, with its lofty summits, the boundary between Siberia and the Soongorey, strikes its powerful ridges down betwixt the lake and the Katunia; and, after having turned round the east side and the lake, unites with the kusnetzkoï mountains. This division is one of the greatest, but at the same time the wildest and most inaccessible of all the altaian ore-mountains; hence it is, that its quality and contents are still but very little known. However, thus much we know, that very powerful granite and porphyry mountains
are

are in its range, and that the earth near and upon it yields jasper, flint breccia, hornschistus, white (probably saline) chalk-stone, coloured marble, blackschistus, marl, sand-stone, and in these there are iron, argentaceous copper, and lead ores, naphtha, asphaltus, &c. The mountains to the right of the Katunaia seem to be particularly rich in ores.

The TSHARISKOI mountains are of very great extent. They comprise the whole space between the highest sources of the Ulba, Ouba, and the Kokofun (till where the Tshuya falls into the Kokofun) and between the course of this latter river and the Katunaia, and carries its powerful forked ridges along both sides of the Tsharish, from its origin to its disemboguing into the Oby. Its direction is from east to west and north-west; and in the south it is parted, by a rude valley, from the oubinskoi snow-mountains. In several places it rises to a great height, heaving up enormous pinnacles, which in some parts are covered with never-failing snow, such as the tigeretzkoï, the torgonskoï, the tshariskoi, the katunayaiskoï, the annuyiskoi, and the italitzkoï snow-mountains, which for the most part consist of granite, porphyry, jasper, and flint breccia. The Tigeretzkoï alone, to a considerable height, consist of marble, which contains a multitude

multitude of sea-shells. These in general are found to be 4392 parisian feet higher than the Shlangenberg. One of the highest points is the Kossipnaia-Sopka, (the ragged head,) consisting of monstrous blocks of hoary granite. In several places of these wild and extensive mountains, iron, copper and lead ores have been dug up, but no regular works have been as yet set up.

The second half of the russian share of the Altaian mountains, namely, the kufnetzkoi range, is still for the greatest part, almost unknown, and inaccessible. It may be reduced to two subdivisions, whereof one shall comprise the kufnetzkoi proper, and the other the krasnoyarskoi mountains, together filling the whole vast space between the Oby and the Yenissey. These mountains throw up, on the Mrafs and between the sources of the Tom and the Yufs, some very considerable summits, many of them covered with eternal snow. In regard to its inward constitution and frame, we have as yet but few authentic accounts. However, from hence are brought various sorts of granite, porphyry, jasper, breccia, saline chalk-stone, marble with sea-shells, horn-stone, slate, serpentine, mountain-crystal, chalcedony, and carnelians. On the Kondoma, are productive iron-mines: in the region of the origin of the Tshumish the salahirskoi

silver-mines continue to be worked with great expectations ; and at Krasnoyarsk several copper-mines were formerly worked, but are now abandoned*. In the last-mentioned circle is also an establishment for smelting iron-ore, belonging to the merchants Savelief. — The highest moun-

* In the district of Krasnoyarsk, to the left of the Yenisey (says Mr. Pallas) the schistus is seen lying quite up to the steep soaring granite mountain, and is rich in ore ; the chalk-mountain is but very narrow about the Tefs and the brook Koxa, and then follow northwards red sand schistus and mail stratum. Beyond the Yenisey we find the schistus-mountains much more northward still, as far as above the upper region of the brooks Siline and Oubei, and the river Mana ; and the chalk-cliff mountain runs as far as to the confluence of the Mana with the Yenisey, and therefore too near upon the town of Krasnoyarsk, where the Flœtze proceed. The chalk-mountain here sends out a rib westward under the name of Arga, which presses westwards out of its direct course to the Yus, flowing much higher than the Yenisey, and its continuation the river Tshulym. From Krasnoyarsk north-west and eastward are pure Flœtze and level country, likewise the straight road thence to Irkutsk through nothing but low forests, which extend northward as far as the upper Tunguska, and where at most but small flœtze ridges appear, so that in these parts the schistus-mountain must be much less powerful, as the granite yet extends in its former breadth and direction, and for example, on the river Ouda, as far as about the brooks Shelma, Nerek, and Sob, where are at present the best veins of muscovy glass.

tains here to be seen in the south are about the source of the Abakan, where the famous mount Sabin, or Shabina-Dabahn, raises his snowy head to a stupendous height, and the Ittem, on the borders of the brook Shantigyr.

The major part of the Altay mountains is more bald than woody. The largest forests are in the low countries about the Alay, the Oby, and the Yenissey. The species of wood are, the *pinus fylvestris*, the birch, the aspin, the *pinus picea*, the *pinus abies*, the alder, the willow, and noble larch-trees*, and cedars. — The principal rivers of these mountains are: the Irtysh and its collateral streams the Buktarma, the Ulba, and the Uba; the Oby, with its main rivers, the Alay, the Tsharysh, the Tshulym, the Tom, the Kattunia, the Yus, and the Abakan, which falls into the Yenissey. The superior regions of the mountains are uncommonly exuberant in waters.

7. *The Sayane mountains.*

The nethermost snow-tops and granitic main-ridges determine, at the Yenissey, and thence as far as the Baikal, the boundaries between Siberia and the Mongolèy; so that only the

* *Pinus larix*.

northern side of the mountains belongs to Siberia. The granite-mountain stands here very bluff, especially in the region of the Oufs, which, to the right, falls into the Yenissey. The Yenissey itself rolls forth from between high snowy summits which hem it in with rocks, into a monstrous vale ; as in general all the superior rivers flow in very high and dreary mountains. Behind the Oufs is a very lofty mountain, Khoïn-Dabahn ; and, more eastward, over the Ouba, a wide-extended with cragged rocky high-soaring summits, the mountain Irgentargak, which continues for above 500 versts, quite up to the sources of the Beikem and the Shishkish. Hard by this mountain follows, to the north-west of the lake Kofsogol, the frontier-mountain Nukutu-Dabahn (or Khangai), whence the Karin falls into that lake ; then, about the origin of the brook Khanga begins the mountain Gurban-Dabahn*, and reaches to beyond the sources of the river Ouro ; where, at a mountain Kifimktu-Dabahn, begins the great chain Oudin-Dsœn, and, between the Vida and the rivulet Selenga, from north-west to south-east, forms the Siberian boundary. Another branch of lofty mountains, proceeds, under the name of Turon-Dabahn,

* The three mountains.

between the sources of the Dshida and Tamnik, on one, and on the river Irkut on the other side, as far as to the Baikal.

The whole range (whose highest ridges nearest to the Yenissey, are called, Sayanskoi-Krebet, but towards the origin of the Oka, Krebet Khandabaga) consists, more or less, of ragged granite and porphyry summits, which interchange with various kinds of schistus; and farther onwards, between the Yenissey and the Angara, is under-run with powerful floetztes of chalk, marl, clay, and sand. — The granite in many of the hills, is so coarse-grained, that the best mines here are of muscovy-glass. In these mountains, about the Yenissey, are found numbers of what are called old thudi mines; notwithstanding that their mineral contents are still almost entirely unknown; and, except iron-ore, but little has been gained from them.

Though the range is here and there quite bald, yet, for the most part, at least in the vallies, it is forested. The species of trees are, the *pinus sylvestris*, the *pinus abies*, the *pinus picea*, the birch, and excellent larches and cedars. — The principal rivers of the sayane mountains are: the Yenissey, the Tuba, the Mana, the Kan, the Byrusia, the Ouda, the Oka, the Irkut, &c.

8. *The mountains of the Baikal.*

This range of mountains has nearly the same direction with the Baikal-sea, accompanying it on both sides from south to north and north-east, runs down to the west on the right of the Angara, where it flattens in a morassy steppe of prodigious extent; to the east it advances from the origin of the Lena, on both sides of that river, and here likewise dies away in a wide-extended floetz-ridge. In general it is a very craggy high-thrown mountain, partly consisting of granite, partly of flint-breccia and chalk-stone. In the inferior regions of the Angara and the Lena its floetz-mountain greatly declines, and frequently produces coal. From the upper angarian ridge, there runs, as it should seem, a branch westward, through the region between the podkammennaia and the nishnaia Tunguska, away over the Yenissey, and consists probably of mere floetz-mountains. About the north-eastern part of the Baikal, the upper Angara, the Mama and the river Vitim, where lie the famous pits of muscovy-glass, all the mountain is granitic *. The mineral contents

* What Mr. Laxmann relates of these granite mountains deserves here to be quoted. " On the south side of the west end of the Baikal, which is called Kultuk, a granite-ridge

tents of these mountains are as yet by far not thoroughly known. The principal of what has been

“ ridge extends along that sea. The promontories, above
 “ 50 fathom high, steep, 800 fathom long, and of far
 “ greater breadth, consist entirely of milk-white quartz,
 “ which is seldom known to form whole mountains (1). Then
 “ follows a fine-grained, one while quartz-micaceous-spa-
 “ tous, and then only quartz-micaceous, granite; and this
 “ composition of granite is progressively rest throughout
 “ in chinks, a curious circumstance but rarely seen in old
 “ granite-mountains, and much doubted of by some oro-
 “ graphers. Some 300 fathom from the quartz excre-
 “ scence several parallel gangues appear, which on the eastern
 “ declivity, towards the brook Sludenaia, extend from west
 “ to east. The most powerful of them is about 12 feet, the
 “ rest are smaller, and fall almost perpendicularly. The
 “ mighty Salband, I might almost say, the prostrate, con-
 “ sists of black scaly mica. To this succeeds a fine-grained,
 “ greenish, brittle quartz, sprinkled with green micaceous
 “ crystals. It comprehends one third of the whole, and
 “ terminates in a solid feldspar, which fills the northern
 “ and larger portion of the gangue, in which frequently pris-
 “ matic schœrl crystals are inclosed. The schœrl is green,
 “ transparent, or cloudy, of a quadrangular or a pyramidal
 “ form, and some crystals are almost five feet long, and fif-
 “ teen inches in diameter; but these are cubically split;
 “ wherefore it is not possible to get them whole. Also
 “ micaceous crystals are frequently interspersed in the feld-
 “ spar. Lastly, the feldspar lies on the quartz granite,

(1) In the Ural-mountains, however, several instances of it appear.

been discovered in them, are coals, asphaltus, sulphur-sources, native sulphur, alum, common-salt-sources, lapis lazuli, muscovy-glass, carnellians, natural prussian blue, and specimens of iron, copper, and lead †.

Some

“ in which but little spar and mica is interspersed. To
 “ conclude, the gangue is visibly along the steep south-
 “ eastern side of the mountain quite to the water level of the
 “ Sludenaia, and in the holes sandy quartz which the spring-
 “ floods have washed through a grot four fathom deep and
 “ two fathom high. The leafy greenish mica appears, as
 “ was remarked of the schœrl, in prismatic pyramidal crys-
 “ tals of from three to nine sides. — The learned are in-
 “ clined to pronounce the whole region of the Baikal to be
 “ the effect of some great convulsion of nature; but in the
 “ range of mountains about the west end of this sea, which
 “ is called Kultuk, all seems to me to have arisen by a gentle
 “ and easy formation. The forementioned structure of the
 “ mountains shews how the minerals are deposited according
 “ to their quantities, and in conformity to the laws of re-
 “ lation. The crystals may perhaps have already received
 “ their flats and points as they part dry and moist.”
 See Crell’s Chymical Ann. 1785, part iii. p. 265. — Of
 similar gangues in granite, various examples are seen in the
 mountains of Altai and Ural; especially in the latter the
 beautiful amethysts, at Murfinsk, are broke out of quartz
 gangues in granite.

† From a manuscript containing the mineralogical ob-
 servations of M. Gruber, in the parts adjacent to the Baikal,
 I extract the following: “ The country round Irkutsk, for
 “ some

Some tracts of mountains about the Baikal, for example, the Burgundu and others, are so

“ some hundred versts on the Angara, and above a thousand
 “ versts on the Lena, is entirely of the floetz kind ; but these
 “ streams have mostly high banks. In the confines of
 “ Irkutsk is a great deal of coal ; and, near the city, on the
 “ bank of the Angara, in a subverted mountain, five veins
 “ of it, each a quarter of an arshine in thickness, at a dis-
 “ tance of about two arshines above one another. — Salt-
 “ springs are here in many places. Not far from the Baikal
 “ magnesia vitriolata is prepared from the water of a lake ;
 “ and 80 versts from Irkutsk, on the Angara are manufac-
 “ tories of common salt. From Irkutsk 434 versts, on the
 “ Lena, extends a bed of copper-ore, which seems to reach,
 “ for 900 versts, to the river Kiren. The country, by the
 “ latter river, is far more hilly, and consisting partly of
 “ chalk-stone, whence several mineral sources proceed.
 “ Nor are specimens of copper wanting. Iron-ores and fer-
 “ ruginous stones are every where met with in abundance.
 “ On the Lena, here and there, are fallies of argentiferous
 “ glantz galena, interspersed in the chalk-stone, and at times
 “ appears in lumps of two or three pounds. It was first
 “ explored about fifty years ago by Messrs. Make and
 “ Kutuzof. They keep four machines at work at the said
 “ copper-floetz, near the villages Botova and Shemanova.
 “ The ores are green-copper, blue-copper, brown-copper,
 “ copper-glas, fahlertz-ores, and malachquite. The gan-
 “ gues are calcareous and sandy. The narrower the gangue,
 “ the richer it is. The proportion is one fourth to forty
 “ per cent. copper, but scarcely a trace of silver. On an
 “ average 100 pood of ore yields 4 pood of good copper.”

high,

high, that they are covered with never-wasting snow. In that sea or lake itself many lofty and steep cliffs ascend above the waters as islands, some whereof consist of solid white quartz. — The mountains are partly bare, but for the most part decked with forests. The most usual kinds of trees are the *pinus sylvestris* and the birch; but here are likewise great numbers of larches and cedars. — The most considerable rivers which derive their streams hence, are the Selenga, the Angara, the Lena, the Vilui, and the Tungusa.

9. *The Nertsbinskoi mountains.*

These mountains, otherwise called the mountains of Dauria, extend from the Baikal and the sources of the Selenga and the Amoor, down the two sides of those rivers; on one side as far as where the Argoon falls into the Amoor, and on the other side up to the heads of the Niufa and the Oldekon, where it annexes itself to the spacious range of Okhotz, or Krebet Stanovoi. It consequently includes the whole space between the Selenga and the Argoon, take the same direction with the course of the Amoor and the Ingoda from west to north-east, and comes down to us from the Mongoley, under the name of Yablonoi-Krebet, or apple-mountain.

tain. It has its greatest elevations about the origin of the Amoor and Ingoda, where it consists of very ragged granite tops, high and steep. Between the course of the Ingoda and the sources of the Khilok and Vitim it is much smaller, notwithstanding which, it seems to stand very high. It here forms a ridge, pretty uniform in its progress, woody, and well watered, and consists for the most part of pure crumbled granite.

That part of this range inclosed by the Amoor and the Argoon, is properly called the Nertschinskoi chain of ore-mountains, (from the city of Nertschinsk, standing on the brook Nertscha, which falls into the Amoor,) is found to be the richest in minerals of any of the mountains hitherto explored in these regions. It produces beautiful kinds of granite, porphyry, jasper, a great quantity of chalcedonies, carnelians, onyx, agate, hornstone, large smoky topazes, aquamarine, hyacinth, and topaz-coloured schoerl, genuine topaz and beryl, &c. granites, fine feldspar glandules, serpentine, asbestos, nephrites, chalk-stone, slate, gypsum, excellent river-spar; salt-lakes, vitriol pyrites, alum-ore; native sulphur, coals, warm springs; zink, iron, copper, and a remarkable quantity of lead-ore, containing

containing silver and gold, of which, since the commencement of this century a great many mines have been opened, and whereof several are still in full work. These regions present very numerous forests. The trees are pinus sylvestris, larch, birch, firs, cedars, &c. — The principal rivers here are, the Selenga, the Khilok, the Vitim, the Olekma, the Karenga, the Niufa, the Oldekon, the Onon, the Ingoda, the Amoor, the Argoon, &c.

10. *The mountains of Okhotsk.*

This great chain, known under the name of Stanovoi-Krebet, borders upon the Nertschinskoi, or upon the Yablonoi-Krebet, near the region of the sources of the Aldan and Oldekon, runs thence on one side northward on the Lena down to Yakutsk, and on the other side westward to the oudinskoi gulf of the okhotskoi sea, which swarms with islands; proceeds round this to the upper Okhotsk, and strikes out several branches in the parts between the Lena and the Indighirka, between this and the Kolyma, and between this and the Anadyr, where a part of the mountain runs out upon the tshuskoi promontory, while the other continues its course into the peninsula of Kamtschatka.

All these extensive mountainous regions are almost entirely unknown *. From the district
of

* To this partition-range (1), says M. Pallas, between the sources of the Vitim and the Nertscha, that mountain-ridge which runs between the bargufinian territory and the Kilok, as also the Yeravna-lake, stretches across the source of the Vitim, of a great height, and much covered with forests, and is rich in all kinds of pyrites, possesses several warm baths, and runs away under the name of Stanovoi-Krebet, in an eastern direction, over the source of the Nertscha and the other streams of the Shilka or Amoor, parting these and all the waters of the Amoor from the brooks of the Olekma. It shoots out a strong ridge on the Olekma, which proceeds north-westward obliquely across the Lena above Yakutsk, abruptly turns with one part on the shores of the eastern ocean, and proceeds with another branch over the sources of the rivers Ouda, Aldan, Maia, and Yudoma, near upon the okhotskian sea, and disperses itself about the eastern entirely mountainous corner of Asia, in ribs that run between the principal rivers. In this easternmost part of Siberia, the mountain is indeed extremely ragged and dreary, even the elevation of the country around is very considerable; but the granite mountain seems there to decrease, and we know of no exceedingly high snow-summits, though the whole region is cold and rude, producing nothing but arctic and alpine plants even in the plains, and even in summer fast frozen marshes and vales, as in the arctic deserts, are no rarities there. About the Biela and Yudoma, in like manner as about the Ourak, this mountain has again an inconceivable quantity of red

(1) The Yablonoi-Krebet.

of Okhotsk has been brought jasper, porphyry, and beautiful chalcedonies and carneoles, fulphur-pyrites, native alum, agaricus aluminaris, mountain crystal, coals, &c. and there likewise are warm springs.

The mountain is for the most part not very abundant in woods. — Its principal rivers on the russian or northern side, are: the Amga, the Aldan, the Uda, the Maia, the Yana, the Indighirka, the Kolyma, and the Anadyr.

11. *The mountains of Kamtschatka and the Eastern Islands.*

The peninsula Kamtschatka consists of a rocky chain of mountains, which is bounded on the firm land by the penzhinskian and anadyrskian gulfs, and by the river Anadyr. On the southern promontory the Kurilly islands are included in it, and towards the west it is connected with North America by the Aleutan islands. Either concerning the outward or inward mineralogical qualities of these insular

and green jasper, of which whole chains are composed; whereas on the whole side of the siberian mountains, this species of substance, except perhaps here and there on the south-side of the Yablonoi-Krebet, in Dauria, is no where to be perceived.

mountains,

mountains, we have but very little information* : we only know that there are some volcanoes in Kamtschatka. — The most considerable stream on this peninsula is the river Kamtschatka.

* Kamtschatka is a chain of mountains, contiguous to the eastern end of this main ridge (1), forming one train with the whole suite with the very mountainous and rocky islands of Kurilly and Japan, which seem again to connect with the mountains which reach from Tybet through China. All these countries and islands seem to have arisen, by subterraneous fires which still continue to act, much more lately than Siberia. The eastern extremity of Asia, as we know from the opposite north-west territory of America, is hilly throughout, and the shores for the most part broken off. All the newly-discovered islands betwixt these two quarters of the world are fragments and summits of mountains, of which those lying nearest to Kamtschatka, keep the bearing towards the south-east, while those off the coast of America proceed in the chain of the Fox-islands towards the north-east, and even in these directions have their oblong form. Between the eastern extremity of Tshutskoi-nofs, and the western point of North America, lie dispersed other little islands, under the name of Andreanofskie-ostrova, but concerning which we have no distinct accounts. Pallas.

(1) The Starovoi-Krebet.

Of the principal Plains of Russia.

Great and numerous as the mountainous tracts of the russian empire are, yet the far greater part of it consists of plains and flats, whereof some are extraordinarily extensive. They are known here under the name of Steppes. I will briefly delineate the chief of them.

1. The Steppe of Petshora.

This plain is bounded on the north by the Frozen ocean and the White-sea; to the west by the Dvina; to the east by the Petshora; and to the south by the Fløetz mountains, which, from the uralian chain stretch away westward across the government of Vologda. It therefore properly lies between and on both sides of these rivers. The ground is for the most part sandy, very marshy, thick strewn with forests, and almost entirely uninhabited; the districts about Archangel, Melen, &c. excepted. The trees consist principally in the *pinus sylvestris*, firs and birch, and on the elevations beautiful larches. This however is only to be understood of the southern part; in the northern, by reason of the extreme cold, wood succeeds but badly. On this level are a great number of fresh, but
not

not very large lakes; and, besides the rivers already mentioned, many others are to be met with, especially if we consider as a continuation of this great level, that plain which extends westward through the governments of Novgorod, Petersburg, &c.

2. *The Steppe of the Dniepr.*

This comprehends the great plain which lies in the government of Ekatarinoslaf, between the Dniepr and the Bogue; the krimean steppe on the left side of the Dniepr, and the whole space which extends over the Donetz, away to the Don, and the sea of Azof, and to the Euxine. This monstrous plain which takes in the greatest part of the governments of Ekatarinoslaf, Taurida, and a part of Voronetz, Karkhof and Kief, is in general of a very dry and sandy quality, with many salt-lakes and salt-plots, and is as yet but very little inhabited; here and there indeed is a wood with oaks and other forest-trees, but for the most part bare of timber, yet for the uses of pasturage and agriculture it is not only not unfit, but in many districts is perfectly well adapted to them.

3. *The Steppe of the Don and Volga.*

This comprises the whole space between the Don, the Volga, and the Kuban *. It is a very great, extremely arid steppe, entirely destitute of wood and water, has but few inhabitants, and contains several salt-lakes, and salt-plots †. It spreads through the greater part of the government of Caucasus and into those of Ekatarinoslaf and Saratof, where, in its sandy and calcaginous floetz-mounts ‡, it contains coals, sulphur-pyrites, and warm-baths.

* Within these confines lies what is called the Kuman-steppe, which comprehends the whole space from thence to where the Kuma flows out of the mountains, and reaches southward to the banks of the Terek and the Caspian sea; northward to the other side of the Sarpa, and eastward as far as the Volga. In this steppe lie the salt-lakes of Astrakhan, some bitter lakes, warm sources, &c. — The whole kumanian steppe, says Falk, has all the appearance of a dried-up sea. It is a sandy, part clayey and salt plain, without trees. But that it may have really been sea-bottom, is highly probable, from the flat shores of the Caspian and the sea of Azof, from the shallowness of their coasts, which is constantly gaining ground; from the equally low situation of the steppe, in which the Kuma, the Manitsh, &c. have scarcely any current, not to mention the general saltiness that prevails, and the salt-places; from the saline lakes, and from the quantity of sea-shells in the sand of the steppe to be seen in every part of it, and from several other circumstances.

† Solontshi.

‡ Veiny or mineral-mountains.

4. *The*

4. *The Steppe of the Volga and Ural.*

This extensive plain comprehends, between the rivers Volga and Ural, all that flat country which formerly went under the name of the Kalmyk-steppe; and, between the Ural and the Yemba, a part of the kirghiftzi steppe lying within the russian borders *. To the south it makes the margin of the Caspian sea, and to the north it skirts the floetz-mountains that run out from the Ural-chain. This, for the most part, sandy, plain is greatly deficient in fresh water and wood; but is therefore the richer in rock-salts, and a multitude of salt-lakes that are

* It is termed the Kalmyk-steppe, because it was left in possession of a horde of that nation, and by whom it was inhabited till their flight in 1771. The Kalmyks call it Gahsen (1). Its western part is denominated from the Volga, the southern from the Caspian, and the eastern from the Ural. It consists of a far-stretching ridge of sand-mountains, known under the name of Rynpeski, but for the most part of a prodigious sandy plain. The aforesaid sand-ridge (2), is said to be between 50 and 150 versts in breadth, according to admeasurements in several places, and extends from Obshtshei-Syrt, or the Ural-mountain, through the middle of the steppe, quite to the Caspian sea. The ground consists of sand, marl, and clay, frequently mixed with sea-shells, and every where bears the most evident marks of its having been formerly, as well as the kumane steppe, bottom of the sea.

(1) The Desert;

(2) Called by the Kalmyks, Narym.

very productive. It contains a great number of districts well adapted to the purposes of agriculture and the breeding of cattle, but is very poorly inhabited. One part of it lies in the caucasian, and the other in the oufimskian government.

5. *The Steppe of the Irtysh.*

Under this name I mean that great plain which extends between the Tobol and the Irtysh, and between those along the Alay and the Oby, as far as the influx of the Irtysh into the Oby, comprising an enormous territory. It is as it were over-strewn with lakes of several kinds of salts, interspersed among numerous forests of pines and firs and birch, in most places well calculated for pasturage and agriculture, but in proportion to their extent very thinly peopled. Between the Irtysh and the Oby this plain incloses also that fine well-watered level called the Barabinian-steppe, on which many considerable lakes are seen. The greatest part of this whole steppe lies in the government of Tobolsk, but the other part in that of Kolhyvan *.

6. *The*

* Another part of this large plain, between the Ischim and the Irtysh, is called the ischim-steppe, which particularly
abounds

6. *The Steppe of the Oby and Yenissey.*

This includes the whole of that large tract beyond the Tshulim (which falls into the Oby) between the Oby and the Yenissey, and extends to the shores of the Frozen-ocean. The best forests, however, are only found in the proximity of the mountain towards the south. On the northern most margin of the Frozen ocean all the wood is low and stunted. The whole of this steppe lies in the government of Tobolsk.

abounds in bitter lakes, but in all other respects resembles the barabinian steppe, and in which, as well as in the former, a great many antient tombs are met with. — The barabinian or barabinskoi steppe, and diminutively the Baraba, occupies the space between the Irtysh and the Oby, southward of the mountain, northward to the farther side of the Tara, and beyond the river Tuy. This diffusive region, in length from north to south, exceeding 600 versts, and full 400 in breadth from west to east, is all a flat, scarcely interrupted by a single hill, though containing many fresh-water lakes, with some of bitter, and a few of common salt. This plain is for the most part of a good black soil, having the face of it enlivened by a number of pleasant forests of birch. All serving to shew, says Mr. Falk, that the Baraba must have been one general bed of waters, and since far more morassy and replete with lakes than it is at present. Even in the memory of man, according to the affirmation of the Barabinszes, the diminution of the lakes, and the exsiccation of the pools, reed-plots, and marshes, has been very observable, as well as the acquisitions thus made by the firm land.

7. *The Steppe of the Yenissey and Lena.*

This great tract of desert is bounded by the Yenissey ; the Tunguska, and the Lena ; reaches northward, like the former, to the Frozen-ocean, and partakes of the same nature and quality with it. One part lies in the government of Tobolsk, and the rest in that of Irkutsk.

8. *The Steppe of the Lena and Indighirka.*

The same account may serve for the region, little known, which lies a vast extended plain along the shores of the Frozen-ocean, between the Lena and the Kolyma, to the two sides of the Indighirka, and is wholly in the government of Irkutsk.

SECTION III.

WATERS.

Of the Seas forming the Boundaries of the Russian Empire.

1. *The Frozen or the Northern ocean.*

THE Russians called this sea, in antient times, Morè Muremanskoe, but at present Ledovitoè morè. By the Goths it was termed Gandawyck,
by

by the Cimbrians Mare Marusa, and by the Latins, Mare Sarmaticum, and Mare Scythicum. The Swedes call it Is-Hafoet, and the Norwegians Leberfee. It borders the whole of the northern part of the empire, from the confines of Lapland to the Tschukotzkoy-Nofs; that is, from 50 to 205 deg. of longitude, and consequently laves the shores of the governments of Archangel, Tobolsk, and Irkutsk. Several bays of very considerable expanse are formed by this vast ocean. The greatest is the bay in the vicinity of Archangel, which commonly goes under the name of the WHITE-SEA, extending from north to south within the land, from 69 to 63 degrees of north lat. and contains a multitude of petty islands. — Next follows the Tcheskaia guba, the karian bay, called also the karian sea, Kariskoe morè; then the Obiskoe bay, which is uncommonly spacious; the Taymurskaia guba, or bay; the Khatangskaia guba; two bays at the mouth of the Lena; and, lastly, the Tshaunskaia guba, at 185 deg. longit. — Of the numerous islands in this ocean the most considerable are: Novaya Zemlia and Kalgueva; but both of them are uninhabited and only frequented by fishermen and hunters. Novaya Zemlia is indeed well supplied with waters; but is rocky, unfruitful, and destitute of wood;

scarcely are a few stunted bushes and polar plants to be met with there. But, on the other hand, this island abounds in rein-deer, white bears, white and blue foxes, and the shores swarm with morshes or sea-cows, &c. Its magnitude is estimated at 120 versts in breadth, and 6000 versts in circumference. On the northern side it is entirely encompassed with ice-mountains. Among the lakes there is one of salt water. From the middle of October till February the sun is not visible at all; but they have numerous and strong north-lights. In summer there are no thunder-storms. The snow falls in many places to the depth of four arshines. For two months, namely June and July, the sun never sets. Between this island and the main land is the famous passage known by the name of Weigar's straits. — Though this sea contains so many bays, not less numerous are the capes or points of land that strike out into it; these spits of land are called in russ Muifs or Nofs; for ex. Muifs-Matfol, Severo-Sapadnoi-Muifs, Severo-Vostotschnoi-Muifs, (or Taymurskoi,) Muifs-Svetoi-Preobrajenia, Svetoi-Muifs, Shalatskoi-Muifs, and Tschukotkoy-Nofs. — In all this great sea there are but three harbours whence at this time any navigation is pursued, namely, Kola, Archangel, and Melen, whereof

whereof that of Archangel is the most famous. But that navigation, in comparison of the prodigious expanse of this sea, is very trifling; however it is partly owing to the short portion of the year allowed by the ice for this purpose; and in some regions there is scarcely time for undertaking it all. As for the northern passage to China, which, as every one knows, has been so often attempted, nothing has hitherto been discovered favourable to any hopes from future enterprises. — The shores in many places, especially those of the White-sea, are beset with rocks; in other parts low, with shoals that, in a manner, forbid access, and the country adjacent very marshy. — The water in this sea is proportionably but little salt, though near Archangel it is so briny, that some quantities of common salt are prepared from it. The ebb and flow are moderate, and in the parts lying most to the north scarcely perceptible. — The fishery is very considerable, particularly of stock-fish, herrings, whales, morshes*, porpoises, sea-dogs, &c.

2. *The Eastern or the Pacific ocean.* .

This ocean washes the shores of the government of Irkutsk, from Tschukotskoy-Nofs, or

* Hippopotamus.

Cook's straits, to the frontiers of China, in other words, from the mouth of the river Aima-kan, that is, from about 65 to 55 deg. n. lat. This ocean is divided into two great parts. That lying eastwards from Kamtschatka, between Siberia and America, is eminently styled the Eastern, or the Pacific ocean: that on the west side from Kamtschatka, between Siberia, the Chinese Mongolèy, and the Kurilly islands, is called the sea of Okhotsk. Thus, from the different places it touches, it bears different denominations: for instance, from the place where the river Anadyr falls into it, it is called the sea of Anadyr; about Kamtschatka, it is called the sea of Kamtschatka; and the bay between the districts of Okhotsk and Kamtschatka is called the sea of Okhotsk, the upper part of which is termed Penjinskoye morè, that is, the Penjinskian sea, as it approaches the mouth of the river Penjina.

In this ocean are a multitude of islands, and the peninsula of Kamtschatka; which, as in their proper place, I shall here enumerate.

1. The peninsula of KAMTSHATKA. It was first discovered by the Russians in 1696, but not made totally tributary till 1711. Kamtschatka lies between the 51st and 62d deg. of n. lat. and between the 173d and the 182d deg. of longitude. Its boundary towards the east and south is formed by the Eastern ocean; towards the

the west by the sea of Okhotsk, and towards the north by the country of the Koriaki. — The country is full of mountains, among which are some volcanoes, whereof one is not far from Nishnei Kamtshatskoi ofstrog, and another at a small distance from Verchnei Kamtshatskoi ofstrog. The former is the biggest. In the year 1762, it first announced its approaching eruption, by a subterraneous noise, and soon after began to spout with flames on different sides. To this burst of fire immediately succeeded a large stream of melted snow, flowing down to the neighbouring valley with such rapidity that it carried away two Kamtshadales who were out in quest of game. The ashes and other substances thrown up were scattered round about to the distance of three hundred versts. In the year 1767 another eruption happened, but by no means so violent. On that evening streaks of fire were remarked to issue from the mountain. The irruption that happened immediately after caused considerable damage to the inhabitants. Since that time no flames have been observed to proceed from it; but both the mountains smoke continually. — Near the village Milkova a merchant of Irkutsk in 1760 discovered iron-ore, and erected smelting-houses on the spot. Silver-ore, though not very rich, is also

said

said to have been found in Kamtschatka. Moreover, the country, in some places, bears birch-trees, poplars, alders, willows, shrubs, and wild fruits of various kinds; white cabbage, turnips, small radishes, red and yellow turnips, cucumbers, &c. In the arts of agriculture they have made no great progress; not that they have been wanting in attempts on their part, for even previous to the year 1765 several improvements were visible in their practice. The corn, from its early maturity, is almost always damaged. Perceiving that the inhabitants were not averse to the labours of husbandry, the late commandant of Kamtschatka, major von Behm, exerted himself greatly in bringing agriculture and grazing into repute, by encouragements of various kinds, and he had the satisfaction to see that his generous pains were not bestowed in vain. His worthy successor too, Mr. assessor Reinikin, continued these laudable endeavours, with such good effects, that in 1782, from 68 pood and a half of winter-rye, 3416 sheaves, and from 594 pood of barley, 24,840 sheaves, were reaped. Oats, wheat and buck-wheat, are much spoiled in general by the early frosts; but hemp succeeds very well. With agriculture, the breed of european domestic animals has likewise been introduced; and even with potatoes

toes a very successful beginning has been made.

2. **BERING'S ISLAND.** This island, which was discovered in 1740, lies in n. lat. from 55 to 56. It is 165 versts in length, and of various breadths; the greatest breadth however is 23 versts. This island consists of a range of bald cliffs and hills in contineity with each other, which, being only divided by a great number of vallies, lying north and south, seem to rise from the sea like one single rock. The highest of these mountains, however, are, perpendicularly, not above a thousand fathoms in height, are covered with a yellow clay, and are very much riven by storms and weather. The vallies are extremely narrow. All the mountains consist of granite, except the rows that stand nearest the sea, which commonly are of sandstone, and, not unfrequently, form stony walls exceedingly steep. In these mountains there are likewise many caverns *. In the year 1741, three pretty smart shocks of earthquakes were perceived. The sea herabouts is not covered with ice. The cold is in general moderate; notwithstanding which there are mountains whereon the snow never dissolves. Neither thunder

* Hence it should appear that there may be chalk-mountains.

nor the aurora borealis have ever been observed here. The island has springs of excellent water, and beautiful cataracts. Of animals there are only ice-foxes, seals, sea-bears, sea-lions, sea-cows, &c. No wood at all grows here; but several kinds of plants are seen. The island is uninhabited.

3. The COPPER ISLAND. This island, which was first visited in 1755, by Yakovlief, a master-smelter, lies east-south-east from the mouth of the river Kamtschatka, in 55 deg. n. lat. and extends from north-west to south-east, very narrow and long, to 55 versts in length. On the northern side its shores are for the most part bold and rocky, interchangeably with considerable bays; but on the south side they are more gentle, and in part sandy. Only towards the south-east cape the coast is fronted by huge overhanging rocks and shoals, which at ebb-tide form a level with the shore. The whole island is perfectly destitute of wood, and very mountainous. The mountains are very lofty, and consist of a brittle stony stratum, which frequently tumbles down in very large masses. In the north-western promontory native copper is found, (from which circumstance the island receives its name,) where, in a steep declivity of the mountain, two openings rise near the surface,

face, scarce twenty fathoms asunder, and about as far from the point or promontory, which lead to a schistus gangart, mixed with quartz and crumby spar, bearing a calcareous earth transfused with verdigris, from which native copper and copper-glass are got. Close to this, on the strand, left by the water at ebb, little bits of copper about the size of a bean, thrown up by the sea, are gathered. On the south side of the point of the mountain-reef, at the distance of some fathoms from the point, on a flat shore, were found three cliffs at various distances, partly below the high-water mark, whence more than half a hundred weight of native copper, in all kinds of bits, exfoliations, and masses were obtained; and still a fourth place presented itself on that side, several fathoms from the point of land, right in the sea, where, in a space 46 feet long and 6 feet broad, several little cliffs with native copper and copper-glass exposed themselves to light. The largest piece of this native copper is to be seen in the cabinet of natural history in the imperial academy of sciences at St. Petersburg, weighing upwards of ten pounds.

4. The KURILSKOY islands. Under this name are comprised all those great and little islands which lie concatenated in the eastern ocean, from

from the foreland of the peninsula of Kamtshatka, or the kurilloy Lopatka, as it is called, between south and west, to the japan island Matmai; some whereof are inhabited and wooded, others quite bare and rocky, and a few that are volcanic. The sea-room occupied by them, taking it from the kurilkskaia Lopatka to the isle Matmai, may be estimated at thirteen hundred versts. Of the two Kurilly islands that lie nearest the Lopatka, the first accounts were brought to Russia in the year 1713. The others have been successively known from that period to 1779, by means of russian mariners, who, at the time, put them under contribution to the crown. At present, we reckon them to be in all one-and-twenty in number; namely,

1. Shoumtshu, the nearest to Kamtshatka. The channel between the Lopatka and this island is 15 verstsover. — The length of the island, from north-east to south-west, is 50, and the breadth 30 versts. The land is low, with moderate ridges of hills. The eastern coasts, about the middle of the island, form steep shores and rocky shelves, and are for some way into the sea studded with rocks. Here is ore; and it is said that a vein of silver has been formerly worked. In the centre of the island is a lake, 5 versts in circuit, and flows by a streamlet into the sea. In this are caught fine

salmon, and several other kinds of fish. There are no standard trees upon the island, only bushes of alder, willow, and an espalier kind of pine, or fiberian cedar, on which grow little cedar-nuts. The inhabitants are not genuine Kurils, but of kamtschadale descent; of these 44 persons pay tribute. — 2. Poromushir; between which and the former island the strait is but 2 versts broad. It lies from north-east to south-west, and is twice as large as Shoumtshu, very hilly, richly furnished with lakes and minerals, but destitute of wood. Here is no scarcity of red foxes, wolves, and all kinds of mice. — 3. Shirinki. The distance from Poromushir to this third island may be about 26 versts. On it rises a round mountain-top, and about it on the coast walls of rock and loose brittle stone, but no sandy bay, nor any safe inlet for shipping. The island is nearly as broad as it is long, and may be about 40 versts in circumference. It is only inhabited by sea-lions and other marine animals, with some red foxes and sea-fowl that have been carried thither with the ice. Except a few sticks of the mountain-pine and some alder-bushes, there is no wood on the island; and as to water, there is neither a stream nor a spring. The rocks are very much disposed to break, and fall in fragments. — 4. Makan Kur

Assey, lies at the distance of 60 versts from the foregoing; in length it is 20 versts, and in breadth 10. It is scattered with rocks, especially about the shores, and many meadow-grounds, and moist plains. It has no standing wood, but such shrubs as in the last-mentioned island. Red foxes here are a few, and sea-beavers and seals lie about the shores of this uninhabited island, which has neither lake nor stream, but plenty of springs on all sides. — 5. Anakutan; the distance hither from the fourth island is 35 versts. It is about 100 versts long and 15 broad. Three summits of mountains here distinguish themselves by their elevation, two of which have exhausted craters. The wood is here likewise scrubbed and scanty. Red foxes are pretty numerous; but few sea-beavers, &c. on the coast. Several streams of hard water flow from it into the sea. — 6. Ar-Amakutan; the distance of this island is no more than 6 versts from the last-mentioned. It is in length 20, and in breadth 10 versts. In the centre of the island stands a rocky mountain, which was formerly a volcano; and towards the straight between it and the fifth island, on the eastern shore, stands another, which is also reported to have been once a burning mountain, the foot and summit whereof are covered with white sand.

sand. This island is also uninhabited, and is only visited by the Kurils on account of the chase; as it abounds with foxes, and on the shores are sea-lions and sea-otters. In the steep declivity of the coast is found wasserbley, or molybdæna, in a white stratum. — 7. Syaskutan; from the sixth island hither it may be 50 versts; the current in the straight between them is very rapid. This island is also uninhabited. It is 80 versts long and 5 broad. Upon it are two high rocky mountains. One of them stands in the northern half, on the north-east shore, extends ridge-wise, and has formerly burnt; round about are rocky hills and a coast of cliffs. The other huge rock is on the promontory near the north-west side, and, from the pinnacle to the sea shore, on both sides, consists of nothing but rock and crumbling stone. — 8. Ikarma; this is about 12 versts from the seventh island, and is 8 versts long. Upon it is a volcano, which at times emits flames. The shore is in general stony, here and there presenting a sulphureous spring. Lakes and streams here are none; and, in regard to wood and animals, the description of the foregoing island may serve as well for this: — 9. Tshirinkutan; to this from the eighth island is computed at 30 versts. The isle is round, and has 15 versts in diameter. A mountain

near upon the strand is continually issuing smoke, and very frequently lets large stones roll down one of its sides, whereby a valley has been excavated from top to bottom. The coast round about is mountainous and rocky. This island has great numbers of wild fowl, but in other respects is like the former. — 10. *Mussyr*; from the ninth, this round and stony island lies at the distance of 35 versts, the diameter whereof cannot be more than 3 versts. It is destitute of water, but is notwithstanding frequented by great quantities of birds. Here are also sea-lions in abundance. — 11. *Rach koke*; the distance from the tenth island to this is stated to be 120 versts. The length and breadth of it may each amount to about 20 versts, and it looks like a solitary mountain pushing upwards from the sea. Formerly it had verdure upon it, with shelves of rock, where the sea-fowl made their nests in great numbers. But these rocky shelves have been demolished by the eruption of subterraneous fires, which split the summit of the mountain, throwing up vast quantities of stones and ashes, and since that time the island has always continued burning. At this eruption those places on the shores where formerly they had 13 fathom water, were filled up with rubbish and ashes into shoals and banks. — 12. *Mutova*; be-

tween this and the eleventh island the distance amounts to 45 versts. It may be about 30 versts. long, and nearly the same number in breadth. On the south side stands a very lofty mountain, from whose summit a thick black smoke is constantly rising, and which at times casts up red-hot stones, spreading danger and desolation around it. To the north, vallies rich in herbs and habitable plains extend, where various kinds of edible roots and wild fruits grow as in the forementioned islands. Foxes are the only land-animals here. Persons subject to the tribute are here numbered at 63. — 13. Rassagu; this island lies 40 versts distant from the twelfth, and is about 30 versts measured either way. It has lofty mountains and steep rocky shores, with very few sandy bays. On the mountains, here and there, is a good forest of birch, alders, and the nut-bearing pine; the vales and flats abound in herbs. On the land is no other animal than the fox, but the cliffs of the rocks afford nesting-places for all kinds of sea-birds, and the beavers and seals lie scattered on several parts of the strand. Here are no streams that yield fish. The Kurils on this island are not numerous, and part of them are baptized. — 14. Ussassyr, lies 17 versts from it, and may be in length and breadth about 25 versts each. It is properly two islands

lying close together, consisting of considerable rocks and cliffs. Opening to the south is a round bay, in the shape of a kettle encompassed with hills, where the strand is sandy; and along it, as well as on the sea-shore, runs a source of almost hot water, and not far from it another. Here too are some spouts, running strong, and throwing the water to a considerable height in the air. In many places we perceive chaps and chafms in the earth of a hundred fathom in length, and sometimes more. Near the great spout the shore is steep and high, producing large lumps of sulphur and salmiak, which partly fall down, and partly are collected there. Otherwise the island is in quality like the former. — 15. Ketoi, lies 36 versts from the fourteenth island, and is 30 versts in length, with about 10 in breadth. On this island are seen high mountains, with their white rocky-walls and summits; at the foot of these and in the vallies are forests of birch, alders, the *forbus sylvestris aucuparia*, the *pinus cembra*, the *pinus montana*, and another species which is probably a *taxus*. The island nourishes white, black-bellied, and red foxes. The sea-animals do not lie in great plenty. The island is uninhabited. — 16. Semuffyr; here we may reckon 30 versts from the fifteenth island. The length of this is 130 versts.

versts, and the breadth not more than 10. This island has four mountains, one of which shews evident traces of its having formerly burnt; else it is of the same properties with the last-mentioned. The passage hence to the seventeenth island is 200 versts. — 17. Tshirpo Oi, with two adjacent islands; both in length and breadth it may be estimated at 15 versts. This island has had a volcano, that has vomited stones over the whole face of it. In lieu of all forest-woods, nothing is here to be seen, except bushes of the above-mentioned *forbus sylvestris*, and no streams, but one little saline lake. In one spot is a salt-spring of that kind called *acidulæ*, the water whereof loses its acidity by boiling. On an adjacent island is also a volcano. — 18. Ourup, distant from the foregoing 25 versts. This island is of a more respectable size than most of the others, being 200 versts long, and 20 broad. It has high mountains with bald heads, very steep, and about them deep glens. On the north coast lie four small isles almost contiguous. In the vales, and beside the streams, sometimes is seen a plain; and as well in the vallies as on the mountains, as likewise over the whole island on the north and east sides, grow good high forests of birches, alders, the *forbus sylvestris*, and sturdy willows. On the shores and in the valley.

O 4

plains

plains the herbs shoot uncommonly high. Streams of considerable size fall from the mountains into the sea, and yield a variety of fish. In the northern part, about the middle of the island, is an inland sea, which sends its waters, by a broad stream, into the ocean. The stream abounds in fish. There are great quantities of rats on this island, and red and white foxes in plenty. Where the mountains are broken into ruins, appear various clefts producing ore, such as copper-pyrites mixed with quartz, sulphur-pyrites as hard as steel, with quartz, and a poor copper-pyrites in a calcareous gangue. This island is only frequented for taking the foxes. — 19. Etorpu; it lies 30 versts from the foregoing, and is either way, about 300 versts. Lofty mountains with numerous summits are diffused over the whole island; one of them, at the northern extremity, emits a continual smoke from its top, and, at intervals, flames. The summits of the mountains are bald, with steep cliffs and heaps of rubbish. Here are strong forests consisting of the same trees with the last-mentioned island. In the southern half, near about the centre of the island, grow larch-trees, in the proximity of the sea, but slender, though farther inland, in the plains of the valleys, good timber-trees, fit for the purposes of building. Here are likewise black bears, and in the

the forests fables and foxes are met with. Of rats there is no scarcity; fish-otters haunt the streams; the brooks abound in fish. During the storms that happen here, whales and large dolphins are thrown ashore by the sea. The sea-otter is not seen here, but sea-lions, though not of any great dimensions. The inhabitants are hairy Kurils, who dwell together in villages. They are numbered to the capitation tax at 92 persons. — 20. Kunassyr; from the former island to this are about 40 versts. It is 150 versts long and 50 broad, and is entirely surrounded by mountains with lofty summits; but on the middle of the islands are low plains. Firs, larches, birch, &c. grow here. At the southern extremity, a flat sandy beach extends from the mountains, where the sea brings up a species of pearl-bearing mussel in vast abundance; some of the bigness of a dessert-plate. The island has lakes and broad streams that abound in fish. It is likewise inhabited by Kurils, who are rated at 41 persons. — 21. Tshikota; distant from the former island 70 versts. It is in length 120, and in breadth 40 versts. It has lofty mountains, with similar forests to those of the twentieth, with lakes and streams of wholesome water. The inhabitants are also Kurils. At the southern extremity lie ten petty isles. — The two-and-twentieth is

is the island Matmai, the largest of all, and the nearest to Japan, whence it is distant but 25 versts. Its size and extent are not at present known. The channel between this island and Japan is said to be no more than 60 versts over, and full of rocks. The current here is extremely rapid. On the southern promontory stands the Japanese town Matmai, where the supreme commander has his residence. The hairy Kurils are in possession of the inland parts of the island. The Japanese and Chinese resort hither in trading-vessels for the purposes of commerce, which consists of taking in barter of the Kurils, sea-otters, seals, and various sorts of furs, also fat, oil, and blubber of whales and other marine animals, eagles' feathers for fletching their darts and arrows, and other articles, which they get very cheap in exchange for silk and cotton pieces for garments, japanned vessels, rice, brandy, tobacco, sabres, knives, pots, and kettles, hatchets, and the like. In the regions of the bay Atkis, the land extends northward in a great headland, where lofty mountains rise in all parts, tending eastward in ridges. Within land are spacious vales between the mountains, and ample rivers roll in currents to the sea. The coast abounds in bays and bights, which might be made to serve as harbours. The forests consist of oaks, beech, elm,

elm, red-wood of an unknown species, birch, willows, and other trees never seen to grow in Russia. On the mountains are a large kind of nut in great abundance. The fields produce a multitude of unknown herbs and vegetables; yet among them are perceived strawberries, serviceberries, cranberries, bilberries, and a large kind of hips and haws. Of animals, the forests afford haunts to black bears, elks, roebucks, deer (which the Kurils hunt with clubs), fables, foxes, hares, and river-otters. The bays and inland lakes swarm with all kinds of ducks and other water-fowl; nor is the country deficient in frogs and snakes. — Of these two-and-twenty kurilli islands, only the former twenty-one are subject to Russia; but all of these do not pay tribute.

5. The ALEUTSKY islands. Under this general appellation are comprehended that chain of islands which extends from Kamtschatka, beyond the Copper-island, north-eastward to the continent of America, whereof the most considerable amount to forty in number. We may clearly admit this chain of islands to be a branch of the kamtschadale mountains continued in the sea. A part of it was first seen soon after the discovery of Behring's island, the rest at several periods since. South-eastward of the Copper-island, within

within 150 or 200 versts between the 54th and 55th deg. of n. lat. lie three small islands known by the names of Attak, Shemya, and Semitshi, and, with a few others, were first denominated by the Russians Aleutskie ostrova, because a bald rock, in the language of these parts, is called aleut. In the sequel this name was extended to the whole chain; though a part of it, namely as far as the island Yamblak, are named the Andrianofskoi, and the rest, lying farther towards America, the Fox islands. — Of the above-mentioned three little islands, Attak is the biggest, seems to have a larger extent of surface than Behring's island, and has an oblong form, lying more west and east. No volcanic traces have been discovered, and here are no land-animals but ice-foxes and rock-foxes, more frequently blue than white. The sea-otters come hither but singly; whereas sea-lions, sea-bears, manatis, and other sea-animals frequent these shores in herds. — That row of islands comprehended under the name of Andrianofskiye ostrova, runs south-eastward from the extremest of those properly called the Aleutan islands, continuing the chain as far as the Fox islands, between east by north and east-north-east, within the 52d and 54th deg. of n. lat. The southern and nearest are inconsiderable islands, and but little known.

More

More remarkable are: Takavangha, which has in its centre, near the northern coast, a burning mountain; Kanaghi, likewise with a high smoking mountain; Ayag, which has a number of good bays and anchoring-places; and Tshetchina, on which a high white mountain over-tops the rest, which apparently is an extinct volcano, as there are still hot springs on this island. — The late Mr. Muller arranged the islands between Kamtshatka and America, in the following manner: Under the general name Salignes are six islands, viz. Behring's and Copper islands, and the nearest Aleutans, whereof Otma, Samia, and Anatto, are most eminent. The second division is called Chao, and comprehends eight islands: Immæk, Kiska, Tshetghina, Ava, Chavia, Tshagulak, Ulagabma, and Amtshigda, or the more distant Aleutans. The third class bears the name of Negho, and contains what are called the Andreanofskiye islands, that is the sixteen following: Amatkineg, Ulek, Unalga, Navotsha, Uliga, Anægin, Chagulak, Illashe, Takavanga, Kanaga, (which two are remarkable for burning-mountains,) Lek, Shetshuna, Tagaluhn, behind which follow some uninhabited little rocks and islands, one of which, on account of its black cliffs, is called by the Russians, Goreloi*, and, lastly,

* The burnt.

Atshak and Amlak. The fourth class are the Fox islands, under the name Kavalang, the number whereof is said to be sixteen, as: Amukta, Tshigama, Tshegula, Uniska, Ulaga, Tanagulæna, Kagamin, Kigalga, Shelmaga, Unmak, Agun-Alæska*, Unimga, or Unimak, towards which a point of land from the continent of America, with a few circumjacent islands, is said to project; and then, still beyond this point, are Uligan, Antun-Duffume, Semedit, and Senegak, whence perhaps Kadiak was formed. The Andreanofskiye and Fox islands are in general just as mountainous as the Aleutan and Behring's island. Their coasts are rocky and surrounded by breakers. The land rises immediately from the coasts, to steep, bald, rock-mountains, gradually ascending higher behind each other, and take the appearance of chains of mountains, with a direction lengthwise of the island, and commonly in the midway of the breadth the highest ridges are formed. Springs take their rise at the foot of the mountain, and flow either in broad and rapid streams, into the neighbouring sea; or, collecting themselves in the rocky vales and glens, form ample lakes, which let off their superfluous waters by natural

* Or, Unalashka.

canals, into the adjacent bays. Several of these islands, where at present no smoking volcano is any longer discernible, as Ayak and Tshetchina, seem antiently to have had them, as their traces are still to be seen in the sulphureous boiling sources that are met with at various intervals. On Tatavanga and Kanaga, among the Andreanofskiye islands, and again on Umnak, on the great island Unalashka, and on Unimga, among the Fox islands; are still active volcanoes, which continually emit smoke, and from some of them frequently issue flames. Only the smoking-mountain of Unalashka has never been seen to vomit fire. Any traces of metals have never yet been descried on these volcanic islands. But carneoles and sardonyxes are brought from them. The soil of these islands is reported to be similar to that of Kamtschatka; the same kinds of edible wild berries and roots have been found there, excepting some few vegetables which seem to be of foreign produce. Besides creeping twigs of willow, larches, alders, and birch, which seem as little as on the snow-mountains, no wood has been perceived on these islands, Kadiak excepted. It is said, however, that on Unalashka, in some deep vales, a small matter of wood shoots up. But the sea wafts all sorts of floating-timber to their shores. Of land-animals, on the Fox islands

islands (though not on the Andreanofskiye) they have an extraordinary number of foxes. Among which there are about as many black and grey, as red and brown. Here are also bears, wolves, river-otters, river-beavers, martins, and ermines, which are however in inferior quantity, and seem to be come over from America. The sea-otter is frequently caught here. Their seas abound in all sorts of seals, dolphins, and whales; sea-lions and porpoises are rare, and sea-cows not at all to be seen. The water-fowl and fish are the same as at Kamtschatka. The winter is tolerably mild, but the summer equally short and unpleasant. These islands are pretty well peopled; the inhabitants mostly pay tribute to Russia, and drive a bartering trade with the russian mariners who go thither on account of the very profitable chace of sea-otters and foxes. They are, however, not always to be trusted, as no small number of Russians have experienced to their cost, having been robbed and murdered by these savages. — Of the inhabitants of Unalashka, their clothing, food, &c. an account is given in the voyages of Capt. Cook.

The most noted harbours in these seas are that of Peter and Paul, (or Avatsha,) on Kamtschatka, and the port of Okhotsk. In the former english vessels have at various times landed; and
from

from both several ruffian ships, for the purposes of the chase and the taking of sea-animals, to the islands in the ocean. Ebbs and floods, and particularly the currents, are very strong. The sea-water is uncommonly salt. But this prodigious ocean is in general by far too little known at present for a particular description of it.

Kamtshatka (says Mr. Kirwan, in his ingenious estimate of the temperature of different latitudes) is so distant from the Atlantic, that its temperature is no way influenced by it, but rather by that of the north Pacific to which it adjoins. On the eastern coast, lat. 55, Captain Cook found snow 6 or 8 feet deep in May, and it continued till June; in May the thermometer was mostly at 32° , and on the 15th of June not higher than 58° ; in August its greatest height was 65° , and its lowest 40° ; in October the hills began to be covered with snow; in November, December, and January, there are violent storms, accompanied with snow, the wind at E. and S. E. In January the cold is sometimes 28° , but generally 8° .

The northern parts of this peninsula enjoy the most moderate weather, being chiefly influenced by the north sea, whose temperature, I believe even in winter, is milder than that of the

sea below the streights that separate Asia from America.

Speaking of the temperature of the north Pacific ocean, the same judicious and accurate author observes, that this part of it is contracted in lat. 66° to the narrow space of 40 miles; and in lat. 52° it occupies the space of only 30° in breadth, from east to west, that is, about 1300 miles; whereas the Atlantic in lat. 52° is about 1700 miles in breadth, and is nowhere contracted to a less space than 700 miles. Add to this, that the coasts of Asia on the one side, and those of America on the other, are bordered with high mountains covered with snow for a great part of the year; and numerous high islands lie scattered between both continents. From these circumstances we have sufficient reason to conclude a priori, that this sea should be much colder than that portion of the Atlantic contained between the same parallels; for, during the winter, the mountains that line the coasts, are cooled to a much greater degree, than the flat coasts of the Atlantic; and the sea, where narrow is entirely frozen; in summer, heaps of ice, being long sheltered from the sun by the islands, are carried down into lower latitudes, and the snow remains long unmelted on the

the mountains ; so that he is inclined to think, that the annual temperature of it is at least 4 degrees below that of the standard in each corresponding latitude. But the observations either on these seas, or the neighbouring coasts, are not as yet sufficiently numerous, to determine, with any precision, the mean temperature of any of these parts.

3. The **EUXINE**, or **BLACK-SEA**. This laves the shores of Taurida and a part of the governments of Caucasus and Ekatarinoslaf. It is divided into the Euxine proper, the Pontus Euxinus, computed to be 1000 versts in length, and 500 in breadth ; and the sea of Azof, the Palus Meotides of the antients, which (not including the bay of Taganrok) is stated to be 200 versts long and 160 versts broad. Both these are now entirely within the confines of the russian empire. The most important of the bays they form, are : 1. The Liman at the mouth of the Dniepr. 2. The bay near Perekop ; and 3. that close to Yenicaly. These seas have but few islands in the vicinity of the russian coasts ; the most considerable of them is Taman. — The principal harbours here are : Kaffa *, Sebastopol, Koslof, Balaklava, and some others. At the

* Now Theodosia.

western extremity of these seas, within the province of Taurida, is a very large pool, called Sivash, or the Putrid sea, which is about 140 versts long and 14 broad.

4. The **BALTIC**, or **EAST SEA**, antiently called Variatzkoie morè, or the sea of Variaghi, lies westward of Russia *. That part of it which washes the coasts of the governments of St. Petersburg, Reval and Viborg is called the Gulf of Finland, which is about 400 versts long, and 100 broad; and the part extending between the government of Riga and the island Œsel, is called the Bay of Riga. The chief harbours in this sea are: 1. Riga (or Dunamunde). 2. Reval. 3. Pernau. 4. Habfal. 5. Roger-vik, now called Baltic port. 6. Petersburg (or Cronstadt). 7. Viborg. 8. Frederickshamm, and 9. Arensburg, on the isle of Œsel. The principal islands in this sea, belonging to Russia, are: Dago, Œsel, Cronstadt, Hochland, Tyterfaari, Lavanfaari, Penifaari, and Seitfaari. There are great fisheries in these parts, and numbers of seals are taken; but far more considerable is the navigation: as it may be computed that

* Ptolomy calls this sea Venedicus sinus; Tacitus, Mare Suevicum; and Pliny speaks of it under the name of Codanus sinus. The Russians call it Baltiskoe morè; and the Swedes, Öster-Sjön.

every

every year upwards of 2000 ships of burden pass to and from the russian ports alone. Much skill and caution are requisite for navigating this sea, and especially the gulf of Finland, both on account of the heavy gales of wind so frequent here, and the multitude of rocks and shelves with which these seas abound. The water is but moderately salt, and has a very perceptible current, so that in northerly winds it is almost fresh to the taste. It is affirmed, on very good foundation, that the water of the Baltic is continually decreasing*.

I shall conclude this head with a short description of the above-mentioned islands, and a somewhat more circumstantial account of Cronstadt, which, as it is properly the port of St. Petersburg, and the centre of its foreign commerce, seems to demand particular notice.

DAGO or DAGEN, and ŒSEL are two considerable but rocky islands. On the latter are nevertheless many beautiful flowers. Considerable quantities of limestone and marble are brought away from it†.

* According to repeated observations made in Sweden, the Baltic is found to subside at the rate of 45 inches every 100 years.

† See Hup. i. 315. iii. 407. Haigold, ii. 363.

ÆSEL, commonly called in esthnic, Kurre faar, i. e. Crane island, but by the inhabitants Sare ma, i. e. The island. A literary gentleman of the place supposes the former name may primarily have been used to express the Kures island: for, as the Kures, especially those on the coast, by the testimony of history, frequently made common cause with the Æselans, the Livonians on the main land might answer the interrogatories of the Germans on their arrival: Æsel is the island of the Kures, Kurè or Kura-faar; whence afterwards Kurrefaar might probably arise. The Lettish called this island Sahmu femme; on which a sagacious critic remarked, that this name likewise may have undergone a gradual change, and at first was Sahna femme, i. e. Side-land. — The length of the island is, from the little strait to Arensburg, 8 swedish miles, or 10 russian versts; and thence to the extremity of the cape that points towards Courland, 6 swedish miles, or $7\frac{1}{2}$ russian versts; consequently, according to the old swedish admeasurement 14, but by the recent russian $17\frac{1}{2}$. The breadth is in some parts 6, in others 8, and in others again 11 versts; being the narrowest at Salm, where it is not above $1\frac{1}{2}$ versts over.

The temperature of the air is moderate and salubrious; the soil is in most parts sand, loam,
and

and clay, and therefore poor ; but with good manuring with cow-dung or sea-weed, and proper culture, it produces good corn, particularly wheat, rye, and barley ; in favourable seasons likewise oats and peas ; only the quite sandy parts seldom yield good barley, especially in dry summers, as it then all runs to straw.

The stone-quarries here are fine and very productive. A statuary from Petersburg came hither in 1778, and dug out large blocks of limestone four or five yards long, of which he made the statues for the new imperial armory at St. Petersburg, and since that time great quantities of blocks and slabs for table-monuments, &c. have been sent to that place. The academy has likewise obtained various kinds of beautiful and rare stones from *Œsel*. The marble lately discovered is veined of blue, red, and yellow, but is not found in large pieces ; besides, it appears to be not of sufficient maturity. Black and grey flagstone are found here ; likewise red-besprinkled grindstone in large masses, which, there being no other demand for them, are broke to pieces by the boors.

The character of the *Œsel* peasantry much resembles that of their brethren the *Esthonians*, only that the former are more cleanly and orderly, are in general not given to drinking, and

such as exceed a little in that particular, prefer beer to brandy. In music and dancing, those of *Æsel* shew more taste than the inhabitants of the adjacent continent: we occasionally meet with boors who produce very tolerable airs from their favourite instrument the bagpipes; they have likewise two sorts of dances; one, called by them the *fuur* or *kœrge tants*, i. e. the great or high dance, and another named *pissuke tants*, the little dance. Their houses are more commodious and more adapted to health than those of the *Esthonians*; they have windows, and some begin to have chimnies. In some of the rooms are deal-floors: several of the wealthier sort no longer burn laths for light, but use tallow candles, and the opulent boors along the coast have iron lamps with sea-dog-oil: however these elegancies are very rare, the generality live in much humbler style.

For the *Esthonians* and the *Lettish* an almanac is annually printed in their own language, and sold at an easy price: but the boors of *Æsel* make themselves their kalendar; for which purpose, as they cannot write, they have made choice of certain signs, which they mark in an artless manner on seven narrow flat sticks tied together by a thong, or more properly on thirteen sides. On each side is a month consisting of 28 days.

By

By this kalendar they know at once every week-day, every immovable festival, and every day that is memorable among them by any superstitious rites; for each has its peculiar sign. They begin to reckon every successive year one day later than the last; and in the use of the kalendar they follow the practice of the Hebrews, and other oriental nations, who begin their books at what with us is the end, and read from right to left.

MOHN, called by the Esthonians Muho ma, which literally signifies, the land of boils or sores. The strait, called the great sound, which separates it from the main land is about 12 miles over; the transport being made in summer by large boats, called prames. The like pass between Mohn and Œfel across the little sound, which somewhat resembles a large haven. Various reasons have been alleged for supposing that it gradually arose and separated the two islands. Henry the Lettonian describes the tract to Œfel with great accuracy; he relates the difficulties of the voyage; but says not a word of the little sound, in mentioning the division of the province to which Mohn belongs. Mohn lies to the south-west of Œfel, forming a parish of itself, with its own church and preacher. Ships in passing the great sound take boors as pilots on board,

board, to whom they pay 5 rubles. Near the middle of the island on an eminence stands the church. Many of the boors live comfortably; almost every one of them having his own little portion of forest, which they keep neat and clean on account of the scarcity of fuel, and which as well as their hay-fields are inclosed by a sort of wall of stones laid one on another. As a shelter from the storms to which these seas are subject, some have built their houses in the midst of these little thickets, carefully gathering up the dry twigs that fall off in the autumn to save firewood. By this prudent diligence their woods have a very elegant appearance; but on the coasts nothing is to be seen but hay-fields and rocks. Not only acorns and bilberries, but also wild nuts and crab-apples grow here, of which last the boors make a tolerably well-tasted cyder; in the farms they also use them for swine-mast. By collecting the stones for inclosures, the inhabitants have cleared their fields of them and gained considerable spots of land. The circumference of the whole island amounts to 65 versts. The passage over the great found in summer with oars is made in about four hours, but with a sail and a fair wind, in less than two.

To Mohn belong two small islands; one lying towards the north, and quite uninhabited, is merely
merely

merely a hay-field for the boors of Mohn; the other lies nearly between Œsel and Mohn, in the little sound, and here live three boors. For some years past Œsel as well as Mohn have been visited with the distemper of the horned cattle, but not raging with so much violence as on the terra firma. — Here is a large stagnant lake, from which a canal has been made to the sea. The whole place is full of shilf so as to look like a wood; but it is cut down and turned to profit. The proprietors of estates have erected two sluices that the canal may be shut in, by which an uncommonly productive fishery has arisen here of the fish that come up the canal in the spring after the fresh water.

RUUN, for so it is pronounced; Runo, Runeholm, as it is usually called, come from the Swedish. In an extensive sense it belongs to the province of Œsel. This island lies in the middle of the gulf of Riga, at the distance of 90 miles from the town of that name, and just as far from Œsel. It is distinguishable far off at sea by a forest of birch-trees, which occupies one of its sides. It is entirely the property of the crown, and is inhabited solely by Swedish boors. Here is a church and a preacher; who, if we may judge from the smallness of his congregation, must be
of

of a contented disposition, and exercised in patience; though his income is very decent, having the tithe of all the products of the island, and a parcel of land beside. Vessels rarely pass between this and Riga; but the people take little concern about the transactions of the firm land. In behoof of the ships here is a light-house, for a supply of which the boors are obliged to buy the fuel on the firm land, for which the crown allows them 40 dollars. There is no farm on the island, except that of the pastorate. The arendator collects the stated imposts merely from the boors, which amount to no great matter. For settling the differences that arise among the boors, the pastor, with a convocation of the elders, decides in the first instance; the discontented have an appeal from this decision to the arendator. It is affirmed, that, among the inhabitants are found some remains of the old Livonians: they speak the runic language, which is entirely confined to them, and perhaps is the true Livonian; also the esthnic, the lettish, the swedish, but most commonly the german and rufs, each with facility from their frequent intercourse with others. In the labours of the chace and the capture of the sea-dog, they are indefatigable, whereby they gain an opulent subsistence.

ence. They live in great harmony, and only intermarry among their own society*.

DAGO lies nearly in the 59th deg. of n. lat. exactly opposite to Œsel, from which it is separated by a small strait. It is distant from the main land upwards of 18, and in some places above 30 miles. This island is at least 54 miles in length, of an oblong shape, having a promontory extending westward far into the sea; a smaller one to the north-east, another to the south, and a fourth almost due east. The others are less considerable. Each of the four principal sides, which are not all quite equal, reach in a straight line from about 25 to 35, but along the shore, on account of its sinuosities, to at least 48 miles. In regard to the main body of the island, the inhabitants reckon it in length from 30 to 36 miles, and in breadth 24; but, taking the promontories into the account, the right line from east to west gives a breadth of 48 miles; and from south to north a length of 36 miles. The western promontory is about 18 miles long, and as many broad.

The passage from the main land to Dago is usually either across the island Vorms; or passing

* These accounts are communicated by pastor Haken, at Yamma, who is very advantageously known to the people of these parts.

by the little isle of Hestholm southward or northward. Many direct their course by the village Vachterbæ, where a forest of alders, seen at a great distance, serves for a land-mark; hence it is forbidden, under very heavy penalties, to cut down a tree of this forest. In summer-time the passage is very safe across the sound in a little boat with three boars; though by reason of some unavoidable circuitous routes, the passage is reckoned at from 24 to 36 miles, and even more. There is doubtless great danger from sudden squalls of wind; but misfortunes are not often heard of, as the parts being well known to the inhabitants, they easily run into some bite of one of the petty isles. It frequently happens that a passenger is long detained by contrary winds, and, not being accustomed to take much provisions for so short a voyage, does penance for this neglect by suffering extreme hunger.

The numerous shallows, sand-banks, and small islands, render the navigation about Dago somewhat perilous; and ships are often stranded here. On the western promontory, whose extreme point is known to mariners by the name of DAGERORT, a light-house is maintained for their benefit. It stands about 3 miles from the sea, on a mountain computed to be 22 fathoms in perpendicular height.

No

No pestilential disease was ever known to make any ravages here; and the population is so great, that the estates are almost burdened by the superfluity of people. Accordingly in summer many of them go to the main land and gain a livelihood by ditching, bricklaying, plastering, &c. where likewise whole families are often sold. The land is not sufficient to their support, and the landlords would derive no profit from their estates if they were obliged to maintain their vassals. As they cannot all live by agriculture, many turn their hands to various arts and handicrafts, in which, by their uncommon ingenuity, they succeed so well as sufficiently to confute the prejudice concerning the stupidity of the Esthonians. We find among them numbers of expert workmen in gold and silver, turners, clockmakers, locksmiths, carpenters, joiners, and even ship-builders. The majority of the country-people are Esthonians; yet here are many, even whole villages of Swedish boors: all of these however have not equal privileges with the former. The island is deficient neither in forests nor in stone. On the western part is much sand; but the southern and eastern parts consist of a bluish clay, and therefore a fertile soil. Accordingly a considerably quantity of good corn is produced; only the seed requires to be sown somewhat early.

Barley

Barley thrives well in rainy seasons. The counts de la Gardie were the principal proprietors in the island, and four capital estates now belong to one of their descendants, the countess Stenbock. The sand-banks that lie about Dago, at low-water resemble islands; but in long westernly winds are overflowed. Near the Puhalep church are the ruins of an antient castle, which the boors call Vallipea, denoting a fortress, and which they pretend to take its date even from the heathenish times. Perhaps it is only the fort Gurgensburg, built by the Swedes in the sixteenth century.

VORMS *, to which the common charts unaccountably give the name of Ormson. It is in length 12 miles; in breadth 6 versts, and the shape of it nearly quadrangular.

NUK, or Nukoe. This island at times becomes a peninsula; being joined to the firm land: but, when the water is high, and the wind blows from the sea, the flood runs so between, that it is entirely cut off from the land, though at times it is possible to walk dry-land from either to the other.

KASSAR, to the southward of Dago, with a chapel, is 6 versts long and between 2 and 4 versts broad.

* In ethnic it is called Vormsisaari.

ODENSHOLM, lying to the north of Nuk, likewise with a chapel.

HESTHOLM, that is, Horse-isle, to the south of Vorms, uninhabited, and only visited for taking its crop of hay.

The other little islands, which are frequented only for the last-mentioned purpose, and that of the fishery, need no farther notice; some of them are merely rocks or sand-banks.

HOCHLAND, or Highland, is an oblong rock, 3 or 4 versts in breadth, and 8 or 10 in length, shooting up almost in the middle of the gulf of Finland, and distant from St. Petersburg 165 versts, from Viborg 106, from the shore of Esthonia 62, and from the coast of Finland 45. The channel about this island is from 20 to 30 fathom, and still nearer the land of sufficient depth; so that ships of the largest construction may sail round it. Two light-houses are kept here by the crown. Hochland may be said to be one mass of stone; not only because it mostly consists of rocks, but also because one rock adheres to the other. These pieces of rock are almost innumerable, and of various dimensions; five of them however are remarkable for their height. In the heart of the isle is a deep and gloomy vale, not above 100 fathoms wide, in which are still to be seen some remains of a very

antient bridge. The island has likewise a great deal of swampy ground ; it is not, however, destitute of wood, such as pines, firs, birch, alder, &c. On the highest rocks are three little lakes, not without fish ; neither is there any deficiency of fresh springs. The inhabitants are Finns, amounting to about 30 families. It cannot be expected that the arts of agriculture are much practised here ; however there are some meadowlands. Of domestic animals here are only a few black cattle and a little flock or two of sheep. Of wild fowl, they have woodcocks, ducks, eagles, hawks, crows, mews, sparrows, yellow-hammers, chaffinches, &c. magpies are not to be seen, though they abound on all the firm land of these parts. Seals are caught in great abundance ; and dolphins are often taken. Of the kinds of fish, herrings*, are in the greatest plenty. Lead-ore is said to have been found here.

TYTERSAARI is a round island, pretty high, but not above 10 versts in circuit. It lies 18 versts to the south-east of Hochland. As appendages, on the western side, or in the sound between it and Hochland, it has four small isles, quite low, but pretty far asunder : Kleintitter, the two Viri, and Vuotcalla, and on the southern

* Clupea.

side a stony ground, 7 or 8 versts in length, to the Narva passage; hence, it is hardly possible to land on this island. A third part of it is rock, another third is morass, and the rest an arid and sterile sand-hill. The island has no springs. The seal-fishery is here considerable. The inhabitants live together in one village.

LAVANSAARI is 7 versts long and 4 versts broad. It is distant from St. Petersburg 120 versts, and from Viborg 82. Of all the islands in the gulf of Finland this is the most populous, except Cronstadt, containing upwards of 40 families. It is surrounded on the north-west side by several petty isles and shallows; it has however no less than three harbours, capacious enough for even a large ship to run into. In the middle of the island is a lake, small indeed, but full of fish. Somewhat of agriculture is in practice here; and formerly there were specimens of forests. The animals on this, are the same as on the foregoing islands.

PENISAARI is only 3 versts long, and half a verst broad, and lies 6 versts from Lavanfaari. It is inhabited only by a few families, and has no water-springs.

SEITSAARI is 5 versts long, and about half as much in breadth, and is 95 versts distant from St. Petersburg, and 75 from Viborg. The sand-

banks here reach as far as to the petersburg channel, and, being invisible from their lying under water, are so dangerous in dark nights, that in this place alone not fewer vessels have been lost than in all other parts of the gulf of Finland together. The land is every where unfruitful; in some of the marshes there is indeed a slight crop of hay. Great numbers of eels and stone-pearl are caught here. The herring and seal fishery is here also considerable. The inhabitants make up about 20 families. Here is likewise a light-house.

CRONSTADT. This island was called by the Finns, Retufari, and by the Russians Kotloiofrof*. In 1723, together with the town, it obtained the name of Cronstadt. It lies at the eastern extremity of the gulf of Finland, which, from this isle to Petersburg, is called the gulf of Cronstadt. It lies west-north-west of St. Petersburg, 39 versts; is 7 versts from Oranienbaum, and from Sestrabek 12. The island, from east to west, is 8 versts long, by about 1 verst in breadth; is flat, somewhat about 8 fathom higher than the water-level; has some wood, chiefly birch, the black alder, and some firs. The soil, as is seen in digging the canals and docks, consists, under the scanty sod, of layers of clay,

* Kettle-island.

sand, and limestone. Two petty islands on its south side are occupied by forts, one of which is called Cronstot, and the other fort St. Alexander. There is still a third, on the northern side of the channel, smaller than either of these, bearing the name of St. John. Cronstadt was built by Peter the great in 1710, as a town, and harbour for ships of war and merchantmen, to which purposes he had already designed it on laying the foundations of St. Petersburg. The town comprehends the easternmost part of the island, is spacious, containing a number of good houses, churches, and public edifices; but, on account of many inferior buildings, mean houses, vacant places, &c. by no means handsome. It is populous, especially in the shipping season, when the streets are thronged with mariners from all the ports of Europe, particularly the English; on whose account, as well as those of our countrymen, who are stationary on this island for the purposes of commerce; here is a chapel maintained by the Russia company of London, at which the service of the church of England is regularly performed every Sunday throughout the year. The Lutherans have also a church on this island, for the use of the Germans. Numerous as the inhabitants of this place are, from the fleet lying here, the

Q 3

garrison,

garrison, the custom-house, the corps de cadets, the labourers in the docks, yards, &c. together with their connections, and the families that live here for the reasons above-mentioned, yet the number of registered burghers is but small; in the year 1783, they were only 204. The man-of-war's mole, as it is called, in its present state, is well worth the attention of the curious, and accordingly is visited by the numerous travellers that take Peterſburg in their route, with great satisfaction. It is inclosed by a strong and elegant rampart built of granite in the sea, under the direction of that gallant commander and upright man, the late admiral Samuel Greig, to whose unwearied activity and uncommon talents the ruffian navy is so highly indebted, and whose loss will not easily be compensated to the empire. Here are also the celebrated Peter's-canal, and the docks. The canal was begun under Peter the great, and completed by general Lubras in the reign of Elizabeth. At the end of the canal stand two pyramidal columns with inscriptions relative to this undertaking. It is lined with masonry, is 1050 fathoms long, in breadth at bottom 60 fathoms, and at top 100; it is 24 fathoms deep, and in this manner stretches 358 fathoms into the sea. Adjoining to the canal are the docks; in which 10 and more ships

of

of the line may be refitted at once. They are furnished with floodgates for admitting and letting out the men of war. The water is evacuated from the bafon by a steam-engine constructed by an english engineer, and is worked by coals from England. Here is a foundery for casting cannon-balls, under the direction of that ingenious artist Mr. Baird, from North Britain ; and a rope-walk for making ships-cables of all fizes. — The marine cadet-corps was founded by Peter the great in 1715, for the education of sea-officers ; and the empress Elizabeth enlarged it in 1752, for 360 pupils. It is now removed to Peteriburg, on the Vassilli-oftrof, where it had been before it was placed at Cronstadt ; being under the superintendance of an admiral, till lately admiral Kutusof, and having officers of the navy for its inspectors. The cadets are of noble families, and divided into three companies of 120 each. They are instructed in languages, geography, astronomy, naval architecture, and navigation, in climbing the shrowds, handling the rigging, swimming, &c. and the greater lads who are called mariners, are taught all the functions of the service ; and, in order to become midshipmen, the lowest rank of officers, must have made three voyages as cadets. Their

uniform is green, with white facings and underclothes. — The marine hospital at Cronstadt is on a very extensive scale. In 1788, it had at several times 25,007 patients; and in 1789, it had 16,809. Of the former number 20,924 went out cured, and of the latter 12,974.

BALTIC PORT. This is the same with Rogervik from Rog, the island in which it is formed.

Of the inland Seas, and principal Lakes of Russia.

The Caspian.

THIS large body of water, being not visibly connected with any of the great oceans, and apparently not having an outlet, has been thought by some writers not properly to deserve the appellation of a sea, but to be more fitly classed among the larger lakes. However, on account of its fishery and the persian commerce it is of great consequence to the empire.

The Caspian, mare Caspium, was antiently called by the Greeks the Hyrcanian sea; the Tartars give it the name of Akdinghis, the White-sea; by the Georgians it is termed the Kurtshenskian sea, and the Persians denominate it

it Gurfen, from the old persian capital, Gurgan, which is said to have stood in the province of Astrabat, only 7 versts from the sea. The name Hyrcanian sea is as much as to say the persian sea; for, in the persian language, Persia is not called the persian, but the Hyrcanian empire. The Caspian reaches in length, from about the 37th to the 47th deg. of north lat. and in breadth, where it is the widest, from the 65th to the 74th deg. of longitude. Its superficial contents amount to above 36,000 square miles, english *. The antient geographers had but a very imperfect knowledge of it. Some thought it was connected with the Frozen-ocean, while others were of opinion that it joined with the Euxine. Ptolemy, among others, embraced the latter hypothesis; affirming that there was a subterraneous communication between the waters of both: as, otherwise it was not to be explained how so many large rivers should flow into the Caspian,

* What M. Pallas says of the antient extent and decline of the Caspian highly deserves perusal, in his travels, part iii. p. 569 & seq. But the insertion of it here would render the article too prolix for the design of this work. It is not only probable that its antient shore might be fixed at the Obshthei-Syrt, but that the Caspian was once connected with the Baltic, and this again with the Euxine; whereof a proof may be seen in the quality of the earth in all these parts.

for

for which there was not one channel out of it. And, indeed who can wonder at the difficulty in which they found themselves involved? For what becomes of the waters of the Volga, the Yaik, the Yemba, the Kur, or Cyrus, of the Araxes, the Bystraia, the Akfa, the Koisa, the Terek, and the numberless others that flow into it? By the sun alone they cannot be evaporated*; there is no visible outlet for them; and yet the sea is never perceptibly swollen, except merely in the spring on the melting of the snows.

They who have recourse to subterraneous passages, through which it must flow into the persian sea, or more probably into the Euxine, usually bring two arguments in support of their notion. In the first place, say they, the Caspian rises very high in a westerly wind; whereas the Euxine, on the contrary, rages most when the wind is at east: consequently, the east wind favours the exit of the waters of the Caspian, and the west wind impedes it. But this is a fallacia causæ non causa. All the winds that bring damp vapours with them are more stormy than those which come from arid regions. But now

* For a more particular discussion of this matter, the reader is referred to the state of Russia, by the ingenious Capt. Perry, p. 100 & seq. printed at London, 1716.

the west wind comes hither from the Euxine and the Palus Mœotis. Consequently the Caspian must necessarily be put in more vehement agitation by it.

Secondly, it is pretended that there is in this sea a whirlpool, which, with a horrid noise, swallows up all the superfluous water, and discharges it into the Euxine. In proof of this, it is farther urged, that a species of sea-weed, growing only on the shores of the Caspian, is found at the mouth of this tremendous vortex. To which they add, that near to this vortex is a sort of fish found no-where else but in the Euxine. And lastly, that in days of yore, a fish was taken in the Caspian sea, with a golden ring about its tail, on which was this inscription: *Mithridates mihi dabat in urbe Sinope libertatem et hoc donum* *. But later accounts know nothing of a whirlpool; the fishes that are said to be found only there and in the Euxine, we shall be better able to speak of when they are more accurately described; and the story from Kircher has very much the air of a fiction. Sea-weed grows every where on the shores of this sea, from Astrakhan to Sulak, and thence again to the muganian steppe.

* Kircher, *Mund. subterr. lib. ii. cap. 13.*

The natural evasion of the waters of the Caspian into the Euxine is therefore an ungrounded hypothesis. An artificial one was attempted by Seleucus Nicanor, after the death of Alexander the great: but, from causes unknown to us, his attempt proved abortive. However, it is asserted by travellers, that traces of very deep vallies are still to be seen, through which the canal is said to have gone. In the reign of Peter I. it was that the Caspian began to be more accurately surveyed, when it was found to be in length about 1000 versts, but in its greatest breadth not more than 400. Thus, in its extreme length, from the river Ural, which is its northern extremity, and lies in $46^{\circ} 15'$ north lat. quite to Astrabat, its extremity to the south, in $36^{\circ} 50'$ it is $9^{\circ} 25'$ long, which makes 646 engl. miles, reckoning 69 miles to a degree. The breadth of it is extremely various. Its greatest northern breadth, from east to west, is between the gulf of Yemba and the mouth of the Volga, containing 265 engl. miles. Its southern broadest part is from the river Orxantes on the eastern, to the river Linkeran on the western side, comprehending 235 english miles. The whole circuit, including the gulf, is 3525 versts. The coasts of the Caspian, from that point of
land

land which forms the Agrachan-gulf towards the west, as far as the river Kulala in Turcomania towards the east is all round northwards low, flat, and swampy, overgrown with reeds, and the water shallow. The direct distance from this gulf to Kulala is 170 engl. miles. On the whole remaining part of the coast, from Kulala southward, and back to the gulf of Agrachan, the country is hilly, has a steep shore and deep water. Of the rivers that were formerly supposed to disembogue into it, several do not exist, for instance the Yakfartes and the Oxus, which were pretended to flow hither from the east. The chief of those that are known to fall into it are: the Emba, the Ural, the Volga, the Kumma, the Terek, the Sulak, the Agrachan, the Kur, and the Aras. — It is related as a striking peculiarity of the Caspian, that during 30 or 35 years its waters are constantly increasing, and then for the same term continually decrease; but this story is unsupported by any stated observations. Much more certain are the violent and dangerous storms * which frequently happen on this sea. The ground, in many places, not far from the shore, is already so deep that a line of 450 fathom will not reach it. The water in general is salt; but not in all

* Burun.

places, particularly not in those where the great rivers empty themselves into it. The shores are for the most part flat, and only on the east side mountainous.

Perhaps the true reason of this sea remaining equally full, is to be sought in the quality of its bottom; which consists, not of a thick slime, but of a shell-sand, the particles whereof touching but in few points, it is consequently very porous. Of the same substance the whole shore is likewise formed. Layer upon layer it lies 3 fathoms deep. This indeed lets the fresh water through, but it becomes immediately salt again by the salt water pressing on it. Through this sand then the water is filtered, and falls into the abyss beneath in the same quantity as it flows into the sea.

In the bay of Emba, above the river Yaik, the reverse is seen. The water there is not let through: it therefore stagnates, and even the fishes putrify. Its exhalations are extremely noxious. The wind that blows over this bay has been known to come on with such surprising force as to throw down the sentinels of the Russian forts erected here, with so much violence as to kill them.

Of the fish with which these parts abound our accounts are not very circumstantial. The salmon,

salmon, however, are as good as those of Riga and Archangel, and even more fleshy and fat. The herrings too are remarkably large, and plumper than the english and dutch, but not so tender.

This sea gives nourishment to myriads of the winged race. Storks, herons, bitterns, spoon-bills, red geese, red ducks, and numberless others. But the most beautiful of all is the red goose*. It has however nothing in common with a goose, neither is it red, but white; the tips of the wings indeed, round the eyes, the beak and the feet are scarlet. It is of the size of a stork, has a long neck and high legs, is very flavoury to the taste, and lives on fish. It may be called *Ciconia*, vel *ardea*, *rostro adunco lato brevi*.

A species of red wild ducks is also frequent here, which fly in the evening to the tops of the trees and the roofs of houses, where they perform a noisy concert. Their flesh is well tasted, not oily, though, like other water-fowl, they feed on fish.

Of leeches here are two kinds, the hog-leech, and the dog-leech, Their holes have two aper-

* Russ. *krafnaia gus*.

tures, one towards the south and the other facing the north, which they open and shut according to the change of the wind.

On the shore, between Terki and Derbent, grows a grass on which all the quadrupeds feed with avidity: to the horse alone the eating of it is fatal. They die upon the spot. Peter the great caused the experiment to be made in his presence, and the common report was found to be true.

The Caspian contains a considerable number of islands, mostly sandy; and to the fish above-mentioned we may add the following: the sterlet, two kinds of sturgeon, seals, and porpuses. Flux and reflux have here never been perceived.

The principal harbours and roads of the Caspian are: 1. Derbent; which, however, scarcely deserves that name; and even the road, by reason of its rocky bottom, is very inconvenient. 2. Nisovaia-pristan, over-against the mouth of the river Nisabat, where there is a good road of firm sand. 3. Baku; here is the best haven in the whole Caspian, being full two fathoms in depth. 4. Sallian, in the northern arm of the river Kur. 5. Enfili, or Sinfili, has indeed but an indifferent road, yet it is one of the

the principal ports of trade. 6. Medshetifar and Farabat. 7. Tukaragan and Manghishlak, have good harbours. — The governments of Ufimsk and Caucasus border on the Caspian.

The Baikal.

It lies in the government of Irkutsk, and extends from the 51st to above the 55th deg. north lat. The Russians style it a sea, more Baikal *; but, if the Caspian be not allowed that title, the Baikal can still less pretend to it; however, the Russians honour it yet farther by giving it that other name of Svetöie morè, the holy sea. Whether it be lake or sea, next to the Caspian it is the largest body of water in the Russian empire. In length it is between 500 and 600 versts, and in its various breadths is 20, 30, 50, and in some places 70 versts. Surrounded almost entirely with high and mostly bald mountains. Towards the latter end of December it is usually frozen over, and in the beginning of May the ice breaks up. The water of the Baikal is uncommonly clear, but it is subject to frequent storms, and these very violent; particularly in September. It abounds in fish, and contains, among others, great shoals of a

* Mare Baikal.

species of herring, there called omuli. Here are also plenty of seals. The Baikal has some islands, whereof the principal bears the name of Olkhon, in the proximity whereof sulphur sources are found. Among the rivers that empty themselves into this sea, the principal are: the upper Angara, the Bargusin, and the Selenga, which join it from the north, the east, and the south; whereas, only one stream, the great Angara, in the west, derives its origin from it. Travellers intending to go beyond Irkutsk, into the remoter eastern parts of Siberia, commonly take their passage across the Baikal. There is indeed a road that leads round it, but it is attended with great difficulties.

The LADOGA lake. It lies in the government of Vyborg, between the gulf of Finland and the lake of Onega. In antient times it is said to have been called Nebo. Being in length 175, and in breadth 105 versts, it is reckoned one of the largest lakes in Europe. It produces a great number of seals. On account of the perilous storms to which it is liable, and the several sand-banks which are ever shifting their position, Peter the great caused the famous ladoga canal to be dug along its shore, from the Volkof into the Neva; which canal is 104 versts long, 10 sajenes broad, one sajenè and a half deep, and
has

has 25 fluices. By the Neva the Ladoga is connected with the Baltic; by the Svir with the Onega; and by the Volkhof with the Ilmen. Into the canal flow the rivers Lipke, Nafia, Sheldika, Lava, and Kabona; into the lake the rivers Pafha, Siæs, Oiæt, &c. Whereas the Neva alone runs out of it. — Only the southern part of the lake belongs to Russia, which has every where a low shore and a sandy rim. On this shore it has also a few low fishery islands and a sandy bottom. That part of the northern side which lies in the government of Olonetz has marble on its coast, whence some of those beautiful and durable kinds of finnish marble are brought to St. Petersburg. As the bed of this lake, for a great extent, is in the lowest part of the country, it receives besides the above-mentioned rivers, the waters that come from the alum hills; all of which, as before observed, have no other outlet than the Neva.

The lake **ONEGA**. It lies in the government of Olonetz, between the Ladoga and the White-sea. Its length is between 180 and 200 versts, and its breadth from 60 to 80. Like the Ladoga it contains a few islands consisting of marble, and in all other properties is much the same. With other rivers, the Vitegra falls into

it on the south-east side, which river takes its rise not far from the Koffha, which falls into the Bielo-ozero. On the Koffha is the pristan Badoga, and on the Vitegra the pristan Vitegorfskaia, which are only about 40 versts asunder. Now, as from the Onega the navigable river Svir runs into the Ladoga; and from the Bielo-ozero the Sheksna flows into the Volga, there needs only a canal to be cut the said distance of 40 versts, for connecting the Neva with the Volga, which would be much more convenient for the navigation here than the passage by Vishnoi-volotshok, because there are no waterfalls, and therefore all the danger and trouble attending them in the present passage would be obviated.

The lake PEIPUS, or Tshudskoe-ozero. It lies between the governments of Pfcove, Reval, Riga, and St. Petersburg, extending in length to about 80, and in breadth to 60 versts. By means of a very broad strait it is connected with the Pfcove lake, the length of which is stated to be 50, and the breadth, which is always decreasing, 40 versts. This latter receives the river Velikaia. Out of the Peipus comes the Narova, which through the Embach has communication with the Vertz-erb lake; out of this, on the other hand, flows the Fellin into the
gulf

gulf of Riga; and consequently a very beneficial water-passage might be made between Riga and some of the inland provinces, by way of the Peipus lake. — The commodities which go to Narva along the Narova are obliged, on account of the falls in that river, to be carried a great way by land. There are a few small islands in the Peipus, but not of consequence enough to deserve much notice, excepting indeed Porka or Bork, called by the Esthonians Porkasaar, which is not only inhabited, but is furnished with forests, and has no less than three villages upon it. A little gulf that is constantly incroaching more and more upon the land, may, in no great space of time, compel the inhabitants in its vicinity to shift their habitations. — Among the several brooks and rivers that flow into the Peipus, the Embach is the most considerable. The exit is through the Narva river into the gulf of Finland. It greatly facilitates the commerce between Pscove, Dorpat, and Narva; though this advantage might doubtless be rendered more beneficial, and extended to more districts by some improvements; particularly if Dorpat could be enabled to send the products of the circumjacent country by water to Narva. Instead of six horses and as many men, the transport of a load of rye would then

require only two people. — In stormy weather the badly-built barks and other vessels are not unfrequently very much damaged; an inconvenience that might easily be prevented by orders from the magistracy to construct the vessels by certain regulations. — The vast multitudes of fish that breed in this lake afford a lucrative occupation to the boors of these parts, and increase the revenues of the adjoining estates, the owners of which let out the parts on which their lands abut at a certain rent. The corn lands adjacent to the shores are by no means sufficient to the nourishment of the people employed in fisheries; this deficiency however is abundantly supplied in autumn and winter by the barter of fish against flour. The fish are principally, rebse, a species of herring, and barbel. The former are sold for 30 to 90 kopeeks a thousand. A hundred barbel will cost from 3 to 6 rubles, but for a live one they will get at least 20 kop. Beside these here are caught pike, perch, a species of carp, whiting, quabb, korushki, gudgeons, &c. The pike and some others are dried in the air and exported; the rebse are sometimes smoked. If the fishermen were rich enough to keep a provision of salt always ready for salting what they do not immediately sell of a good capture, they would not be obliged to throw
away

away so much putrid fish as they do, to the loss of their profit and their labour.

The **ILMEN** lake, formerly **Moisk**, lies in the government of **Novgorod**, and is about 40 versts in length and 30 in breadth. It receives the rivers **Msta**, **Lovat**, **Shelon**, &c. and gives birth to the **Volkhof** alone.

The **BIELO-OZERO**, or **White-lake**, is in the same government with the foregoing; is about 50 versts long and 30 broad, and receives into it several smaller streams. The only one that flows out of it is the **Sheksna**, which falls into the **Volga**. The water of this lake is clear, having a bottom partly clay and partly stony. The clay is generally of a white colour, and in stormy weather causes a strong white foam upon the surface of the water. Doubtless it is from this circumstance that the lake first obtained its name **Bielo** *. It contains plenty of fish and crabs.

The lake **TSHANY** lies partly in the government of **Tobolsk** and partly in that **Kolhyvan**. It communicates with the lakes **Moloki** and **Abishkan**, is of a very considerable circuit, and abounds in fish.

The lake **ALTYN-NOOR**, or **Teletzkoe-zero**, lies in the government of **Kolhyvan**, on a very

* White.

considerable elevation of the altaian mountains, by which it is also entirely surrounded. Its length is computed at 126, and its greatest breadth at 84 versts. From this lake arises the famous river By, which, at its conjunction with the Katunia, takes the name of Oby.

Of the chief navigable Rivers of Russia.

So vast an empire as that of Russia cannot but have a great number of considerable rivers. I shall here only take notice of the most material, arranging them according to the several seas into which they flow.

Rivers that flow into the Baltic.

The DUNA. This is named by the Russians sapadnaia Dvina, and by the Lithuanians Daugava. It derives its origin from a lake in the government of Tver, at Biala, not far from the sources of the Volga, pursues its course through this and the government of Pskove, constitutes the boundary between the governments of Polotzk and Riga, the republic of Poland and the duchy of Courland, and falls not far from Riga, at Dunamunde, into the Baltic. In its course it takes up several smaller rivers, as, the Toroptza, the Evest, the Oger, and the Yagel, and from
Courland

Courland the Bulder-Aa. The Duna is navigable all the way from its uppermost regions, facilitating the commerce from several governments, and from Poland and Courland, to an uncommon degree. About a thousand vessels and barks, of various dimensions, pass annually along it, to and from the aforesaid towns. It has however one inconvenience, which is, that near Dunamunde, there are a great many shoals, every year increasing and shifting their positions, which occasions much difficulty in the navigation. To this inconvenience may be added another, that, in the Dunaburg circle, there are several falls, the shooting whereof is attended with great difficulty and danger. Some reckon these falls at 14 in number. I shall only mention one near Seleburg, another by Lennevar den, and a third adjacent to Rummel. This third is the last the vessels have to shoot before they come to Riga ; the first is highest and most dangerous ; a concealed point of rock threatens all the floats and vessels that shoot the fall with imminent destruction, and numbers, at low water, perish without redemption. The steersman, notwithstanding he has taken a pilot on board, must exert the utmost caution. The noise of the water allowing of no oral commands, they are usually given by the hand or by waving the cap ; and the

the people, just ere they come to the verge of the watery precipice, fall down on their knees and pray. The frequent disasters that happen here are very profitable to the courish boors that lurk in the adjacent caverns, or the purpose of appropriating to themselves what they can from the wreck. No remedy has hitherto been devised for this great nuisance. Between Uexkull and the Rummel, in the bed of the river, lie a number of large stones, some of which have been already blown up at the expence of the corporation of Riga. These obstacles do not allow at all seasons of the year a free passage, which is only commodious or attended with the least danger at high water in the spring. The few vessels whose owners resolve on a voyage back, against the stream, are obliged not only to be drawn by men, but must be unloaded at the falls. The constant defection of the water in summer renders the voyage still more difficult and tedious; on the early coming on of autumnal frosts utterly impossible. — At Riga the Duna is 900 paces broad. Here annually in April a bridge of pontoons is thrown across it, and fastened by poles, except the part that opens to let the ships go through, which is fixed to anchors. Generally in November the river is covered with ice, which in March or April again breaks up. The frost not unfrequently

quently makes the water passable on foot in the space of eight-and-forty hours. The bridge is then taken away, and safely laid by in a small arm of the river, called the Soodgraben. The whole summer through, the great number of ships of all nations lying close to the bridge on both sides, is allowed by all travellers to be a fine sight. — This Duna is the port of Riga. — But, as nothing is perfect, this beneficent river often puts the city and the circumjacent territory into the most serious alarm, and does them considerable mischief. In the spring season the ice drives hither from Lithuania; while about the town and to the sea all is still fast. The outlet being stopped, and the accumulation continually augmenting, the most lamentable inundations have been frequently occasioned. That of the year 1771 is, from the loss of people, houses, and cattle, and a damage of more than 200,000 dollars in amount, still fresh in the memory of all men. In 1770, the cutting-through of the solid ice greatly facilitated the evasion of what was floating, which also run off in 1772, without causing any damage. The salmon of the Duna are the most excellent and the dearest of all Livonia. To conclude, this river has in general a sandy and clayey shore, and a discoloured water.

The

The NEVA. It draws its current from the lake of Ladoga, traverses the government of St. Petersburg for 60 versts in length, flowing through the city, and at last falling in several arms, into the gulf of Cronstadt. It reaches the city under the walls of the Nevski monastery, after having just above it admitted the waters of the rivulet Ochta. The several mouths of the Neva are all within the city ; and are called : the Nevka, which runs on the right side, in the Viborg quarter, among the hospitals, and flows, in a beautiful stream, north-westward and then westward into the gulf. On its western direction it divides on the right into the great Nevka, and on the left into the little Nevka, thereby, and by cross arms, forming islands. Across this division runs the Karpovka, a morass-brook, from its left side to the little Nevka, and thereby forms the Apothecary island. The Nevka, the great * Nevka, and the little † Nevka, are from 50 to 100 fathom broad, have shallow places, some of which are often dry, good neva-water, and flow sluggishly. The FONTANKA goes from the Nevka, on the right of the Neva, flowing as a slow morass-brook, first southernly, then westward parallel with the Neva, to the Cronstadt gulf, into which, with the great Neva, it formerly fell into

* Bolshaia.

† Malaia.

two arms. In the former reigns it had been deepened and lined with sides of timber, but gradually filled up again, and in summer was partially dry. By order of her late majesty it was dug afresh, to a bed of one fathom in depth, and in breadth 10 or 12, and its sides faced with hewn granite raised on piles to the height of a fathom above the water's level, with an iron balustrade; and, withoutside of this, a pavement five feet broad of granite flags, for the accommodation of foot passengers. Its banks are now full of fine flowing neva-water, is navigable for barks of burden, and constitutes one of the chief ornaments of this imperial residence, worthy of the great and benign sovereign who honoured it with her throne and her presence. The expence of this undertaking, which Catharine the second begun in 1780, by general Bauer, and completed in 1789, by prince Vasemskoi, was truly imperial. The length of the river is nearly 3000 fathoms or about 6 versts. Every fathom of which on either side, without reckoning the digging of the river, or the procuring and the driving of the numberless piles for the ground-work, and exclusively of the sumptuous bridges of ornamented granite that cross it at various distances, the embanking it alone with granite cost at first 182 rubles, but
 this

this price gradually rose higher and higher, till at last 300 rubles were paid for every fathom in length on either side. — The MOIKA runs from the right of the Fontanka, not far below its departure from the Neva, and flows almost parallel with it, wherein it falls to the left of the great Neva, close above its mouth. It was a morass-brook, like the Fontanka, and like it had been dug out in one of the former reigns, and faced with wooden walls. In this state it still remains, much choaked up in various parts, consequently the water runs very slowly in summer, and is far worse than that of the Neva, however it is useful for culinary purposes. The empress had signified her intention of having this river dug out and banked with granite, for the benefit and decoration of the city. — The KATARINACANAL, was likewise a swamp-stream, running above the Moika, and falling into the right side of the Fontanka, not far above its mouth. Catharine the second caused it to be made between 7 and 8 fathom wide, and one fathom deep for its bed, and to be faced on both sides, for its whole length of 4 versts, with granite, like the Fontanka, and to be furnished with footways, an iron balustrade, and descents for the conveniency of taking up water. An arm of it,

finished in the same manner, runs by the Nicolai church, from the right side of the Katarina-canal, to the Neva, and is called, The NICOLAI-CANAL. That, named after the sovereign, the Katarina-canal, was begun in 1764, and finished in 1790. It has very much drained the low quarter of the town through which it passes, and procured it the advantage of pure running water, and a passage for barks loaded with wood for fuel, iron, and other necessaries. — The LITTLE NEVA* goes off from the main river on the right side under the walls of the fortrefs, and flows west-north-westward to the gulf. It is broader than the great Neva, but more shallow, and purposely rendered innavigable by Peter the great, on account of Sweden and the customs. Its right shore is left in its natural state, without buttrefs, and has a parallel arm at the Petrovka, which, flowing to the Nevka, forms the isle Petrovsk. The left shore has above, as far as the buildings on the Vassilli-ostrof reach, a buttrefs of timber, and lower down, in the woods, two morassy collateral arms that form islands, and are called Tshernaia retchka, or the black rivulet. — Having made this distribution of

* Malaia Neva.

waters, the main stream, or the great Neva, flows, in a south-westward direction, from 150 to upwards of 200 fathoms in breadth, and in some places of great depth, into the Cronstadt-gulf. Its right bank, as far as the buildings on the Vassilli-ostrof reach, is supported by a wooden buttress five or six foot high. The whole extent of the left-hand bank, Catharine the second caused to be quayed with granite, from the foundery to the farthest extremity of the Galerenhof, excepting only the space in front of the admiralty. This grand work, which was begun in 1764, and completed in 1788, is distinguished from the stone margin of the Fontanka by still greater strength and more magnificence. The ground under water is rammed with piles for three fathom in breadth, with long trunks of fir trees, two fathoms and a half in length. These piles were driven during the winter by engines placed on the ice, and in the summer sawn deep under the surface of the water, by machines contrived for that purpose. This done, the foundation was laid, first by filling the interstices of the piles with flints and pebbles, then placing upon this solid basis several layers of flat pudofskoi pliets, a hard kind of stone so called, consolidated together by a tried cement, which was then built upon with squares of granite of

1½ to 2½ foot thick, and the wall finished above as a foot pavement a fathom broad, covered with similar quadrats, at the height of 10 feet above the water. The parapet is also of the same hewn granite, two feet and a half high, and one foot and a quarter in thickness. At certain distances openings are made in the quay for descending upon the ice in winter, and stairs with spacious landing-places and benches, for taking up water, unloading the barks, and for the repose and convenience of those who walk here for business or pleasure. Lastly, the face of the wall is furnished with massy iron rings, for the fastening of galliots, barks, barges, and other vessels. This truly imperial quay is, for its length, which, deducting the space before the admiralty, is 1650 fathom, or 3 versts, for strength, magnificence, and the cost of building it, unequalled in Europe, and the constant subject of admiration to foreigners. — In the gulf of Cronstadt, just facing the mouth of the Neva, near the southern shore, lie two low marshy islands, with brushwood upon them, of which the greater is called Dolgoi ostrof, or Long-island, where a considerable fishery is carried on. — Besides these several streams, there is another canal within the town, lined with brickwork and masonry, surrounding the admiralty; likewise

some short canals with wooden sides, which, running between the Neva and the Moika, part the galley wharf and New Holland. — The LIGOVA canal, 20 versts long, has its water from the Duderhof hills, with which it supplies the fountains of the empress's summer gardens, distributing it also to the gardens of the late prince Potemkin, and at the same time supplying that quarter of the city with water.

The water of the Neva, and its several arms and running canals, which, besides the Ligova canal, supplies the whole city, is to be ranked with the lightest, clearest, and purest of river waters. Foreigners, indeed, for the first month or two of their stay at St. Petersburg, perceive a certain alteration in their habit of body, becoming more lax than usual, which has chiefly been laid to the charge of the neva water. This induced Model, and afterwards Georgi, both professors of the imperial academy, to submit it to a chemical process: when the former found, in 80 medicinal pounds of the water, taken above the city, only 68 grains of calcareous earth and 3 grains of vegetable extract; and the latter, in 50 pounds of water, taken within the city, no more than 40 grains of calcareous earth, and 5 grains of extract; he found it also very poor in air. The accident to foreigners seems, therefore,

fore, to be more owing to the change in their way of living and other causes, than to proceed from the water of the Neva, which amply compensates the want of wells and springs to the city.

In still weather, the level of the water in the several outlets varies about 2 feet ; strong and continued east winds drive the water quicker into the gulf, and accordingly it is 3 or 4 feet lower than the mean height. On the contrary, strong, lasting west winds so greatly restrain the current, that the river rises about as much above its mean height. In continued storms from the west, it rises in the arms, measured at the fortress, 5, 10, 15, and more feet. At 5 feet it overflows only the shores without buttresses in the western quarter of the town ; at 10 feet and upwards of increased elevation, only the eastern part of the town remains not overflowed. This has frequently happened ; but, by good luck, the inundations hitherto have always lasted but a very short time, generally but a few hours ; and, by reason of the progressive heightening of the parts built upon, by the rubbish of old, and the materials of new erections, by digging canals, &c. they become more rare and less injurious.

Some thousands of ships and barks annually pass and repass the Neva, either coming from the inland parts of the empire, or from foreign

countries across the seas, bringing commodities and provisions to the amount of several millions of rubles, to St. Petersburg. — This river receives in its course the Ijora and the Tosna.

Rivers that fall into the White-sea.

The DVINA. This river is called by the Russians sievernaia Dvina, the northern Dvina; which name it first assumes on its junction with the two rivers the Sookhona and the Youga, which arise in the government of Vologda. This junction is formed at the city of Ustiug, whence the Dvina takes a north-westward course; and at Archangel falls into the White-sea, after having divided itself into two considerable arms. In its course it takes in some pretty large rivers, and several lesser streams, such as, on the right, the Lufa, the Vichegda, and the Pinega; and to the left, the Vaga, the Yemza, &c. Opposite to the mouth of the Pinega stands the antient city Kholmogor. The merchant-vessels run into the eastern arm of the Dvina, on which the fort Novaia Dvinka is built; but at first the western, where stands the monastery Korelskoi monastir, was the most frequented. This however is now no longer passable. In general the shoals increase from year to year in both, and such large ships cannot now run in as formerly. The Dvina
has

has the honour of having given reception in 1553, to the first english ship that ever came to Russia. To conclude, it flows mostly through a swampy and woody region, is navigable from Ustiug, and is tolerably abundant in fish.

The KULOI, and the MESEN. Both flow eastward of the Dvina, into the White-sea, not far from each other, in the district of the town of Mesensk. The former takes its rise in the government of Archangel; the latter in that of Vologda. In their not very extensive course they admit the waters of several smaller rivers.

Rivers that fall into the Frozen ocean.

All these rivers have a very perceptible ebb and flow.

The PETSHORA, called also Bolshaia, or great Petshora; to distinguish it from the Vishera, which the Si yanes call Peshorya, whence originates the name Petshora. The Petshora takes its rise in the western side of the Ural-mountains in the government of Vologda, follows a north-west course, and falls into the Frozen ocean, in the government of Archangel, after dividing into several powerful arms. It now flows through a low, foresty, and almost uninhabited country. At first, when Siberia was conquered, the way

thither was generally by the Petshora. They sailed up the Dvina, the Vichegda, and the Vim, then went a short space by land to the Petshora, then up that river, and by land over the Ural-mountains, to the Sofva, from this into the Oby, from the Oby into the Irtish, from the Irtish into the Ket; and from the Ket into the Yenissey, &c.

THE OBY. This originates properly in the chinese Soongoria, from whence it issues in a copious stream, under the name of Tshulishman; and, in 52 deg. north lat. and 103° 30' longit. falls into the lake Teletzkoe, in the russian territory. From this lake, which is called by the Tartars Altinkul, it flows out again under the appellation of the By, not taking that of Oby till its junction with the Katunya. Of all the rivers of the russian empire it is esteemed the largest. In its upper regions it has a strong current and several cataracts, but particularly a great number of islands, mostly in the circle of Berosof. At 67 deg. north lat. and 86° longit. it empties itself into the gulf of the same name, which unites it with the Frozen ocean in 73 deg. 50 min. north lat. and 90 deg. of longit. The principal rivers taken up in its course by the Oby, are, to the left: the Katunya, the Tsharysh, the Alei, the Irtish, the Conda, and the Sofva; to the right,

right, the Tshumysh, the Tom, the Tshulym, the Ket, and the Voch. Up as far as the mouth of the Ket, the Oby has mostly high and rocky shores; but farther on, quite to its entrance into the Frozen ocean, it, generally speaking, flows over a clayey, sandy, and marly bed. It is navigable till very near up to the Teletzkoe ozero, uncommonly prolific in fish, and in many places is accompanied by forests of large pine and birch trees. The course of this river extends about 3000 versts. Of its collateral rivers,

1. The IRTISH is the most considerable. It rises likewise in the chinese Soongoria; flows through the lake Norfaian, in north lat. 46 deg. 30 min. then enters the russian territory, and, after meandering through a large tract of country, throws itself in 61 north lat. and 86 longit. into the Oby. In its way it takes up the following rivers; to the right, the Buchtorma, the Ulba, the Uba, the Om, which is of a clear but black-looking water, and the Tara, all of which again take in a multitude of smaller rivers and streams: to the left, the Ablaket, the Dfargurban, the Ishin, the Vagai, the Tobol, and the Konda. The Irtish forms several islands, whereof some disappear at times, and their places are supplied by others; even its course is very variable, so that it is often navigable in a place where it

was not before, and vice versa. Its water in the inferior regions is whitish and light, whence it should seem that it flows over a bottom mostly of calcareous marl. It swarms with fish, and its sturgeon are of a flavour particularly delicate.

2. The TOBOL takes its rise 52 deg. 30 min. north lat. and 81 deg. longit. in the country of the Kirghizti, in the chain of mountains that parts it from the government of Ufa. It pours itself into the Irishi, at Tobolsk, after running a course of about 500 versts, during which it takes in the following rivers: the Ui, the Isset, the Tura, and the Tavda, which all fall into it on the left. Of these the Tura is the largest; it rises near Verkhoturina in the Ural-mountains, in about 59 deg. north lat. and glides into the Tobol, in 57 deg. 30 min. after having taken up the rivers Salda, Tegil, Pyshma, Nitza, &c. into which last mentioned, the Neiva, the Ætsh, and the Irbit flow. By this accession of waters the Tura becomes a considerable river, not much inferior to the Tobol itself. — The Isset is likewise a river of some consequence. It rises out of a lake 2 versts from Ekatarinenburg; and, after having taken up several rivers, as, the Sifert, the Sinava, the Tssetsha, and the Miæs, falls into the Tobol, in 57 deg. north lat. — The Tobol has mostly low shores;

shores ; and in the spring season frequently sheds its waters far around.

3. The YENISSEY, which the Tartars and Mongoles who inhabit the superior regions of it, above the Tunguska, call it Kem, and the Ostiaks, Gub or Kheses, which signifies the Great river, is at first composed of two rivers, the Kamsara and the Veikem, originating in the chinese Soongoria (or Bukharia) and form a conjunction in 51 deg. 30 min. north lat. and 111 of longit. About the mouth of the Bom-Kemtshyug it enters on russian ground, and hence first takes the name of Yenissey. After various windings it now tends northward ; and, in 70 deg. north lat. and 103° 30' longit. forms a bay containing several islands ; and at last, in 3 deg. 30 min. of length, falls into the Frozen ocean. In autumn, when its water is at the lowest, its breadth, e. gr. at the town of Yenisseisk, is about 570 fathom, whereas in the spring it is 795 fathom and upwards. The coasts of the Frozen ocean, between the mouths of the Yenissey and the Oby, are called the Yuratzkoi shore. The more considerable streams taken up by the Yenissey, are the following : on the right, the Ufs, the Tuban, the Kan, and the three Tunguskis, that is, the upper, the middle or podkammenaia, and the lower Tunguska. On the

the left: the Abakan, the Yelovi, and the Turukhan. The Yenissey, in its superior regions, flows over a very stony bed; and its shores, particularly the eastern, are mostly beset with lofty mountains and rocks. It has in general a very rapid course, though near its mouth it flows so gently that the current is hardly to be perceived at all. In the neighbourhood of Turukansk and elsewhere it forms some considerable islands; and between the cities of Yenisseisk and Krasnoyarsk, several cataracts are to be seen. The Yenissey is navigable from its mouth as far as Abakan, and yields great quantities of the best fish. Of all the rivers taken up by the Yenissey,

The TUNGUSKIS are the most considerable. The upper Tunguska arises out of the Baikal, and bears the name of Angara till its union with the Ilim. Besides that, it takes up several other rivers, as, the Koda, the Tshadovetch, the Iriki, the Kamenka, the Olenka, and the Tatarskaia, all on the right: to the left, the Oka, and the Tshuna or Uda. This Tunguska has mostly a stony bed, strewed with rocks; with several cataracts, five of which are very considerable. Though navigable the whole summer through, it must yet be confessed, that this navigation is toilsome and difficult. — The middle Tunguska takes its rise in the government of Irkutsk, among

among the Baikal-mountains, not far from the origin of the Lena ; and, after a course of about 800 versts, and after having, on the right, taken up the Tshiucha and the Tshorna, falls into the Yenissey in 62 deg. north lat. — The lower Tunguska takes its source, indeed, in the same district, but bends its course northward ; and after having taken up on the left, the rivers Niepa, Svetlaia, with many others ; and on the right, the Rosmaknika, the Turiga and the Gorela, and run a course of about 1500 versts, strikes into the Yenissey, not far from Turukansk. Near the Turukanskoi-Froitzkoi-monastir, are several dangerous whirlpools in it.

4. The KHATANGA. It arises out of a lake in the government of Tobolsk, in about 68 deg. north lat. and 110 longit., and in 120 longit. rushes into a large bay of the Frozen ocean, called Khatanskaia guba. This river takes its course for the most part through a low and very marshy country. The most considerable rivers taken up by the Khatanga, are the Kheta and the Potigan.

5. The LENA. This is the greatest river of eastern Siberia. It takes its origin on the north-western side of the Baikal from a morass, runs at first westwards, then to the south, then again to the district of Yakutsk eastwards, and lastly
towards

towards the north, where after having divided itself into five great branches at its mouth, and thereby formed four considerable islands, flows into the Frozen ocean. Its course is computed to be 5000 versts. Its source is in 52 deg. 30 min. north lat. its mouth in 73 deg. lat. and the eastern arm in 153, and the western in 143 deg. of longit. The Lena has in general a very gentle current. The bottom is mostly sandy, and the shore only in the upper regions beset with hills and cliffs. It takes in a multitude of smaller rivers; the most considerable of which are, to the left: the Mansurka, the Ilga, the Kuta, the Inæ, the Vilvi, and the Muna: to the right, the Kireng, the Vitim, the Patoma, the Olekma, and the Aldan, into which again several brooks transmit their waters. But of all these the largest are, the Vitim, the Olekma, the Vilvi, and the Aldan. Out of the Lena travellers pass into the Aldan, from that into the Maia, and from the Maia into the Yudoma, from which they have but a short route to make by land, to Okhotsk.

6. The YANA. It takes its origin in about 64 deg. north. lat. out of a little lake, directs its course, with some small turns, towards the north, and previous to its discharging itself into the Frozen ocean, forms five considerable arms, which

which issue in a capacious bay. No large river, but a great many small streams flow into the Yana.

7. The INDIGIRKA arises in nearly the same latitude as the Yana, in the Stanovoi-Krebet, is reinforced by the Amekon, and a multitude of smaller rivers; and falls, in four great arms, into the Frozen ocean.

8. The KOLYMA, or KOVYMA, arises also in the Stanovoi-Krebet, almost over against Okhotsk; is much invigorated by the waters of numerous rivers, particularly the Omolon, forms a multitude of islands, and by means of four broad arms flows into the Frozen ocean.

Rivers that flow into the eastern or Pacific ocean.

The ANADYR. This arises in the country of Tchuktchi, out of a lake among the frontier mountains which are a continuation of Stanovoi-Krebet, here called Yablonoi-Krebet; and is therefore to be distinguished from the nertschinkoi chain of mountains which also bears the name of Yablonoi-Krebet. The former has its appellation from the brook Yablona, which is the first considerable stream that runs into the Anadyr, on the right. Indeed it admits a great many other streams on either side; but they are none of them very large. The bed of the Anadyr is in general sandy, and its current is
by

by no means rapid; its channel is very broad, and contains a good number of isles, but throughout of so little depth, that it can scarcely be crossed in any part with the common ferry-boats of that country, called *shitiki*, which have no iron in their construction, being only sewed together, and drawing no more than two foot water. Only at the going off of the ice is the stream of any tolerable depth, from the mouth of the *Krafnaia* to the place of its exit. From the source of the *Anadyr* to the brook *Yablona*, not a wood is to be seen, but pure barren mountains; below the *Yablona* are some stripes of meadow-land and some poplar trees; and on the mountains to the left, for about 100 versts above *Anadyrskoi-ostrog*, are thin woods of larch trees and dwarfish fiberian cedars *. The whole of the northern region as far as the *Anadyr*, is in general destitute of standard trees, and has scarcely any pieces fit for pasture; whereas south of the river, at no great distance, especially about the head of the main, the *Penshina* and the *Aklan*, are tall timber forests in abundance. From the *Anadyr* quite to the *Kolyma* and the Frozen ocean, and throughout the whole country of the *Tchuktchi*, no more forest has been discovered; nay, in this last country, the mea-

* *Slanetz*.

dow-shrubs scarcely shoot above a span high; as in the whole tract along the northern coast of Siberia. But so much the more frequent are the flats, overgrown with yellow and white moss, on which innumerable herds of wild reindeer find pasture.

The KAMTSHATKA, on the peninsula of that name. It rises in the southern half of it, takes its course northwards, but turns westward, and falls below Nihnei-Kamtshatskoi, into the ocean.

The AMOOR. It is formed of the two rivers, the Argoon and the Shilka, and first takes this name on their conjunction, and therefore first on the chinese territory. The Shilka takes its source in the high frontier mountains, runs with them through the nertschinskoi district, and on the left takes up the Ingoda, with several other rivulets. The Argoon arises out of a lake just upon the frontiers that part Russia from China, and forms the border all the way to its exit in the Shilka.

Rivers that fall into the Caspian.

The YEMBA or EMBA. It takes its rise in the southernmost part of the Ural-mountains, and constitutes the border between the usimskoi government and the country of the Kirghizti, though the forts are much more to the west, namely on

the river Ural. The Yemba takes up only one river of any note, the Sagis, has a strong current, but is at the same time very shallow. It is the most eastward of all the rivers that fall into the Caspian.

The URAL (formerly the YAIK) has its source in the western sides of the Ural-mountains, breaking out of them near the fort of Orsk, for a long tract takes its course westward, but from thence runs directly south, and, at about 47 deg. north lat. and 70 deg. longit. falls into the Caspian. It is a large river of a rapid current, and pure water, known to the ancients under the name of Rhymnus. Its course is computed at 3000 versts. It has formed from times immemorial the limits between the Kirghistzi and the Bashkirtzi; and still there are upon it 30 forts and several foreposts, against the former. The most considerable rivers taken up by the Ural, are, to the left, the Or and the Ilek; and to the right, the Kifil, and the Sakmara. Its banks, in the upper regions, are ridged with steep and lofty rocks: but lower down it flows through a tolerably dry and very saline steppe. It is peculiarly abundant in fish.

The VOLGA, one of the most famous rivers of Europe. By the writers of antiquity it is some-

times named Rha, and sometimes Araxis, by the Tartars Idel, Adal, or Edel, (denoting plenty,) and by the Mordvines is still called Rhau. It takes its source in the government of Tver, in the Valday frontier mountains, from several lakes, flows thence through that and the governments of Yaroslaf, Kostroma, Nishney-Novgorod, Kafan, Simbirk, Saratof, and Caucasus, and falls near Astrakhan into the Caspian, after having parted into almost 70 arms, and thereby formed a multitude of islands. It is reckoned to travel in its course above 4000 versts. It is well known to be an old project of uniting the Volga with the Don, in order to be able, by means of this water-communication, to sail from the Baltic and the Caspian into the Euxine. Seleucus Nicanor, after him Selim II. and lastly Peter the great, attempted the execution of it, and, in all appearance were prevented from succeeding, certainly not by the impracticability of the matter, but by other circumstances. It is thought that this junction, by means of a canal in the district of Tzaritzin, where the Don runs at the distance of only 50 versts from the Volga, would be more easily effected than by the proposed Kamishenka. — On the shores of the Volga are a number of very respectable cities and towns, as, Tver, Uglitsh, Romanof, Yaroslaf, Kostroma,

stroma, Balochna, Nishney-Novgorod, Kufmode-miansk, Tshebakfar, Kafan, Simbirsk, Sifran, Saratof, Tzaritzin, and Astrakhan. It rolls its waters through many fertile regions, and in its inferior course is accompanied by beautiful forests of oak. In the spring it violently overflows, and is then navigable where at other times it is not. However, the chief navigation of it begins already at Tver. The Volga possesses this material advantage, that it has no cataracts, nor any otherwise dangerous places; but it is continually growing shallower from time to time, so as to give grounds for apprehension that it may one day be no longer navigable for vessels of any tolerable size. At the commencement of the present century, the Siberian salt-ships might still be loaded with 130,000 or 140,000 poods of that article, and so be brought to Nishney-Novgorod: at present they can take in no more than from 70,000 to 90,000 pood. In fish it is extremely plentiful, especially in sterlet, sturgeon, biela reba, &c. — The Volga, in its extensive course takes in a great number of rivers and brooks; the principal of which are:

1. The KAMMA. It is the largest of all the rivers that unite their streams with the Volga, and at its mouth is almost larger than it. The Kamma rises in the government of Perme, from the

the western projections of the Ural-chain, nearly in the same region with it, waters a small part of the government of Viatka, flows through a large tract of the government of Perme, forms the border between the governments of Viatka and Ufa; and, at Laishewa, 60 versts below Kafan, falls into the Volga. In its course it runs over a space of 1000 versts. By the Tartars it is called Tsholman-Idel. For the transport of salt and iron from Siberia, it is one of the most important rivers of the empire. This is chiefly effected by the Tchuffovaia and the Belaia, two rivers of considerable magnitude, flowing into it on the left. Beside these, the Kamma takes up a great number of other rivers, such as, on the left, the Kolva, the Yaiva, the Kosva, and the Ik; on the right, the Obva, the Okhan, and the Umyak. The Kamma, above the mouth of the Belaia, (which is of a whitish water,) has a blackish, wholesome water. It is mostly attended by a ridge of mountains, consisting of sand, gypsum, and marl, with forests of firs and oaks. It is tolerably well stored with fish; and they are reckoned better tasted than those of the Volga.

2. The ОККА. This arises in the government of Orel, irrigating that, and the governments of Kaluga, Tula, Mosco, Refan, Tambof, Vladimir,

and Nisliney-Novgorod, then falls, at the city of the last mentioned name, into the Volga. It is a very considerable river, navigable to its upper regions, takes up a multitude of smaller streams, and thus effects an excellent communication between most of the inland governments of the empire. It receives, on its left, the Ugra, the Moskva, and the Kliasma; and on its right, the Upa, the Oserr, and the Moksha.

The TERLK. It originates in the caucasian mountains, runs at first towards the west and south, but turns afterwards entirely to the east; and, in about 44 deg. north lat. and 65 longit. falls into the Caspian. Together with a great number of little mountain-brooks, it takes up, among others, the Bakfan, the Malka, and the Soonsha. — Its source lies properly in the snow-mountains of Caucasus, on the highest partition-ridges of the frontiers of Georgia. Its course is rapid; and, in the months of July and August, when the melted snows rush down in torrents from the mountains into the plain beneath, swells to the height of 8 or 10 feet above its usual level in autumn, winter, and spring. It then overflows its banks in many places, and lays the adjacent country under water; making itself in different parts new beds, and choaking up the old with sand. In its inferior course, as far
as

as Kisliar, it is almost entirely unaccompanied by woods; farther up, to Starogladka, by a few; and thence upwards, its banks are richly garnished with forests, particularly of oaks, wild-fruit trees, and a variety of others. It does not freeze over every year, though in winter it is full of driving ice. In this season its water is tolerably clear, which, at other times, above Kisliar, is turbid with earthy particles; but, when taken up, it soon grows clear, and is then bright, well-tasted, and of good quality. Below Kisliar, the river has a far less fall, and divides into several arms, in which the parted stream so gently flows, that it has time to depose its earthy particles, whereby these arms are alternately filling up; so that now one, and then another, represents the main river. In the lower regions, on the shores of the Terek are seen vineyards, mulberry and other fruit-trees, to which succeed salt-lakes, and springs of the same nature. Its bed is mostly of sand and clay. In fish, the Terek, as well as all its collateral rivers, is poor. Yet there are caught in it sturgeon *, beluga †, fevruga ‡, salmon in plenty, fat-fish §, carp, barbel ||, shad, pike, sudak &, pearch θ, lelichtsch ξ, fish-otters, beavers, tortoises, &c.

* *Acipenser sturio*. † *Acipenser huso*. ‡ *Acipenser stellatus*, Pall. § *Cyprinus chalcoides*. || *Cyprinus barbus*.
 δ *Lucio perca*. θ *Perca fluviatilis*.
 ξ *Cyprinus barba*.

Rivers that fall into the Euxine.

The KUBAN, or the HYPANIS of the antients, It rises in the caucasean mountains, and is formed by the confluence of a number of small rivers. With the river Tumefek, it makes several islands between the Palus Mæotis and the Euxine, of which one of the finest is the isle of Taman; a principal arm of it falls northward into the former, and the other southward into the Euxine. The river in general, and the first arm in particular, has a rapid course and clear water. But that arm which falls into the Euxine, flows in a very gentle current, has a troubled water, and forms at its mouth a pretty spacious bay, which however is so shallow that it can never serve as a haven. On the other hand the isle of Taman has an excellent haven at Phanagoria. The Kuban has neither rocks nor water-falls, and therefore is well adapted to navigation with vessels that do not draw much water. It admits to the right, the rivers Barakla and Barsukta; and to the left, the Yaffik, the Yaffi, the Urp, the Sagrassa, the Laba, the Karabokan, and several other small rivers that flow into it from the mountains. In the mountainous part of the country watered by it, its banks are very steep; but in the lower regions they are flat, where the country is one continued steppe, almost entirely destitute

destitute of wood, but in other respects fertile enough. The isle of Taman particularly possesses an excellent, and in some districts an ever-verdant soil. The mountains in the superior regions of the Kuban are thickly strewn with forests. In its neighbourhood also, namely at Atshuel, is a fine lake of salt water.

The DON, or, as it was called by the antients, the TANAI, is the second chief river which falls into the Palus Mæotis, and by it into the Euxine. It originates in the government of Rezan, from the Ivanoffskoe lake, and, after a course of about 1000 versts, falls into the sea near Azof. It flows for the most part over a flat country, covered with flowers and forests. The forests, consisting mostly of pines and oaks, accompany it quite to the circassian mountains. Its bed has neither rocks nor large stones, but is formed generally of sand, marl, and lime; for which reason it flows very gently, and here and there has broad sand-banks and small islands. It is liable to violent inundations. Its water is turbid and whitish; and is said to be not wholesome to every constitution. It indeed abounds in fish; yet in this regard is not to be compared with the Volga. Below Volonetz the Don commonly freezes about November; and February has scarce begun before the ice goes off. This river

is, therefore, from its magnitude and other qualities, of the utmost importance to the trade of these parts; it flows through the governments of Rezan, Tambof, Voronetz, and Ekatarinoflaf. Among the principal rivers taken up by the Don, are: the Voronetz, the Khoper, the Donetz, and the Manitsh.

1. Of these the DONETZ is the most considerable. It takes its rise in the government of Kursk, flowing as far as Caucasus through a fertile and very populous country. It is navigable from the Ifum, and has nearly the same water and the same kinds of fish with the Don.

2. The VORONETZ has its origin in the government of Tambof; in a fruitful region furnished with beautiful forests of oak. Its banks are well inhabited, and copiously strewn with towns and villages. By means of a canal that unites two petty rivers that run into the Voronetz and the Okka, one may sail in small barks from the Voronetz into the Okka, so that the Volga is thus in a manner connected with the Don; but, not to mention that this passage can only be effected in little barks, the vast circuitous way that must be taken up the Volga, in order to come into the Don, defeats the benefit that might otherwise be derived from it. — Not far below the city of Voronetz, we see the
dock,

dock-yards at Tavrof on the Don established by Peter I. in the year 1708, where large ships are constructed for the navigation of the Euxine.

The DNIEPR, or the BORYSTHENES of the ancient geographers, arises in the government of Smolensk, not far from the district where the Duna and the Volga take their source. This large river directs its course southwards to the Euxine; and, after having formed the Liman, a marshy lake about 60 versts in length and 10 in breadth, falls into the Euxine near Otchakof and Kinburn. Besides traversing the government of Smolensk, it runs through the provinces of Mohilef, Tchernigof, Kief, and Ekatarinoslaf, and forms the boundary between three of them and Poland. The Dniepr pursues a course of about 1500 versts, chiefly through the most fertile provinces and the most genial climates of the empire. At Smolensk it usually freezes in November, at Krementshuk in December, and at Kief in January; and in the last-mentioned region, breaks up about the beginning of March. It is broader, deeper, and more rapid than the Don; has a number of islands, a bed partly sandy and stony, and partly of marl; and, though a calcareous, yet a salubrious water. At Kief there is a large bridge of boats thrown over it, of 1638 feet, or 546 fathom

fathom in length, and in many places has very commodious ferries. To the above-mentioned city, from Smolensk, it is navigable in perfect safety; but below it, at a distance of 60 versts from the influx of the Sura, down to Alexandroffkaia, are thirteen cataracts in regular succession, which are caused by a multitude of banks and blocks of granite projecting into the river; nevertheless, at very high water, it may be navigated with empty barks, above it, the cargoes whereof must be shipped again in other vessels at 70 versts still lower down. From these water-falls to its mouth, the distance is about 400 versts, where it may be passed in all parts without the smallest danger. Its mouth is in many places deep enough, and might be made commodious for shipping. As far as Kief it is accompanied by thick forests; but below that city, its shores are mostly bare, or, especially in the upper regions, beset with hills and mountains. Lastly, the Dniepr yields plenty of fish, particularly from its mouth, to Kherson, and farther up. The Sosh, the Desna, the Soola, the Pfiol, the Vorskla, the Sammara, the Ingu-latze, and several other waters, flow into it.

The **BOGUE**. It rises in Poland, parting that kingdom and a portion of european Turkey from Russia; and, at Otchakof, falls into the

the

the Euxine. Among others, it takes up the Ingul, the Sinucha, and the Guiloï; and thus becomes a very considerable river.

Mineral waters.

It is indeed surprising that in this vast empire so proportionably few mineral springs should have been hitherto found, if we except the salt-sources and lakes, which do not belong to this place. In mineral substances there is certainly no deficiency in many parts; it must therefore arise from some other cause. Perhaps the great distance from the sea. Hence it may likewise be, that in the inland parts of the country every trace of the old volcanos, that doubtless existed here some thousand years ago, is effaced. — The mineral waters at present known, and occasionally applied to medicinal use, are :

1. *Sulphureous* and liver-of-sulphur† waters.*

(Hot springs.)

These are the most numerous. Some are of luke-warm, others warm, and a few of hot water, viz.

* Sulphur-springs, which usually afford hepatic air or sulphurated hydrogen gas.

† Liver-of-sulphur springs; i. e. springs which are impregnated with sulphurate: they also afford hepatic air or sulphurated hydrogen gas.

1. A fetid sulphureous spring is in Sarepta on the Volga, in the bed of the mill-pond, and another near Saratof.

2. Another is near Selo Klintfchy in the government of Perme.

3. The like fetid water and mud are contained in many of the bitter lakes and other waters in Siberia; for instance, the lakes Karaulnoë and Gorkoë on the lines of Ischim, the Pustey on the Kurtamysh, and the stream Oscha on the Baraba, which emits a great quantity of inflammable air.

4. The baths on the Terek in the caucasean government. These were already known to Peter the great, and were examined by his order in 1717 by Dr. Schober, but have been thoroughly explored only of late by the academician Guldenstædt. The principal of these is the St. Peter's bath, formerly called the Baragunfchian; and next to this the St. Catherine's, the St. Paul's, and the St. Mary's baths. The mountains whence they issue consist of sandstone and whetstone. St. Peter's bath is formed by three several sources pretty distant from each other. Their proper heat is 71 deg. of Reaumur's thermometer, let the temperature of the atmosphere be as it may. The warmth of the other sources rises from 41 to 60 deg. All these waters, even the cold ones, are clear as crystal.

crystal. In taste and smell they resemble liver of sulphur, which however they entirely lose in 24 hours. M. Falk thinks their component parts, in a pound, consist of 12 ounces and about 3 grains of Glauber's salt, 3 grains of calcareous earth, very little sulphur dissolved in mineral alkali, no iron, little æther, and a trace of alum: according to Guldenslædt, however this water contains nothing more than sulphur and alkaline salt, which, mixed, produce liver of sulphur, no iron, but a considerable proportion of calcareous earth. — Besides these there are other warm springs in these parts, as: the warm baths on the river Koyssa, near Kisliar, called St. Andrew's baths, and likewise proceed from sandstone; and the warm springs on the Podkumka, 30 versts from the fort of St. George, issuing from mount Maschuka. Their component parts are the same with the foregoing, only their warmth is perceptibly less. In regard to the medicinal virtues of these baths, it is asserted that their internal use is very beneficial, in the swelled neck or other scrofulous indurations of that kind, stricture of the breast, phthisis arising from glandular obstructions, in obstructions of the liver, in the jaundice, in hypochondriacal affections, hæmorrhoids proceeding from obstructions in the bowels; in fine to persons who labour under a shortness of breath from indura-

5
tions

tions or calculous substances or mucus in the lungs. The internal and external use of them is said to be good in gravelly complaints attended with pains in the back and loins, and disorders arising from a checked perspiration ; in short, in all arthritic and rheumatic diseases. The inward, but still more the outward use of these baths are reckoned serviceable in distempers caused by an obstinate acrimony of the blood, in scorbutic and cutaneous eruptions. Bathing in them is prescribed against stiffness of the joints, and contractions of the limbs, &c. The inward and outward use of them is also profitable in tonic and convulsive spasms, as also in rickety complaints. This water cooled is found greatly to promote a discharge of urine. Taken daily with milk it is extremely beneficial in consumptions. — Guldenstädt, in the years 1771 and 1773 cured forty patients by means of these baths, and since that time the use of them is become pretty general in the country round. — In the basins of these warm waters there is a deposition of tophus and a small portion of native sulphur. In the vicinity of them are naphtha sources*.

5. The baths on the Bargusin, in the province of Nertschinsk in the government of Ir-

* For a more circumstantial account of these waters see Falk, *Beytrage*, book ii. p. 13 & sqq. and Guldenstädt in *Mitt. cal.* 1778, and *Petersb. Journ.* book ii. p. 134.

kutsk. They were found in a waste region at the distance of 80 versts from any habitations. But M. Grund, surgeon to a regiment quartered in those parts, having successively prescribed the use of these baths to several patients; M. von Klitschka, the governor of Irkutsk, in 1779 caused some buildings to be erected there. They have proved of great advantage to persons afflicted with rheumatism, scurvy, phthisis, and other complaints of a like nature. The water is drank either pure, or on account of its nauseous taste, resembling that of rotten eggs, mixed with milk. It promotes perspiration, does not quench the thirst, and may be drank in large portions. When boiled it is of a very agreeable taste, and is particularly good with tea*.

6. The warm springs in what was formerly the Soongarèy. Some of these are near the russian borders. There are several of them, as, on the Araschan, which river proceeds from the mountains, and falls into the lake Alakta; the spring gushes from sandstone. 2. On the mountain-stream Yablischu, which flows into the Emil. 3. On the rivulet Lepschy gliding from the mountains of Musart, into the Tzuy; and, 4. high up the Irtysh, which was frequently visited by the late khan Kontaisch†.

* St. Petersburg Journal, 1779, book ii. p. 376.

† See Falk, Beytrage, book ii. p. 16.

7. The warm springs in the ruffian part of the Altay-mountains. There are but very few of them: the most considerable are about the head of the Abakha. They have not, however, yet been examined.

8. The warm springs in the Sayane-mountains. I have heard of some in those parts; but know nothing more of them.

9. The warm springs in the Baikal-mountains. They are for the most part highly fulphureous, and the water of some of them is very hot, which in cutaneous disorders is used with good effect*.

10. The warm springs at Kamtschatka, and on the kurilly and aleutan islands, which have been spoken of before.

11. The fulphureous springs on the Sok and on the Volga; for which the reader is referred back to the description of the Ural-mountains.

2. *Vitriolic waters.*

(*Sour-springs.*)

Strong martial waters are not uncommon; but, of proper sour waters which are applied to medicinal purposes, only the following* are known:

1. St. Peter's well in the district of Olonetz, in the village of Buigova, where it trickles in a

* Georgi's travels, tom. i. p. 79. 93, &c.

valley.

valley. It was fitted up in 1716 by Peter the great, as well for his own use as that of the public, for which purpose several buildings are constructed about it, together with a church. The water has a vitriolic, inky taste, and a sulphureous smell. The well is 4 arshines in depth, and $3\frac{1}{2}$ in diameter, sunk in a hollow full of roots of trees and weeds, (partly in their primitive state, partly impregnated with ferruginous matter, or entirely converted into iron-stone,) interspersed with stones, and $1\frac{1}{2}$ arshines in a clayey kind of stone with much sulphur pyrites. In the deeper parts of this vale is a stratum of vitriolic earth, from which vitriol is here prepared *. This well has for many years past grown almost entirely out of use.

2. The well near Tzaritzin ; at Sarepta in the government of Saratof. This is at present the most famous in the russian empire, and the only one that may be said to be frequented. It was discovered in 1775, by Dr. Vier†, pastor of the community of moravian brethren at Sarepta. In

* A like mineral water where the vitriol spontaneously arising may be collected in poods at a time, lies at the distance of 17 versts from Zurukhaitu in Dauria. Pallas, travels, iii. 425.

† As is generally supposed ; but these springs had been before observed by Messrs. Falk and Pallas.

a circuit of 200 versts, no less than 32 mineral springs have since been found. The largest and most copious lies 9 versts to the north-west of Sarepta, 18 versts from the town of Tzaritzin, and 3 versts from the bank of the Volga, in 48 deg. 43 min. n. lat. The country round is very pleasant, abounding in odoriferous herbs, in pure and pellucid sources, in all kinds of fish, cattle, game, poultry, &c. Dr. Vier caused this spring to be inclosed, and at first prepared spring-salts and magnesia from the running water. The component parts are, in 12 ounces: 32 grains of bitter salt, $2\frac{1}{2}$ grains of selenite, the same quantity of calcareous earth, and a strong tincture of iron, with but little æther. The main spring is inclosed 7 feet high and 4 over. The water is commonly from 3 to 4 degrees of Reaumur warmer than common water. The taste is not unpleasant, clean, and rather saline. Near the well the air is somewhat cooler. The following properties are ascribed to these springs: they promote the circulation of the juices, preserve from putrefaction, brace and cheer, cleanse the fluids from acrimony; and are good for wounds. The water is also an excellent laxative, promotes perspiration, purifies the blood, abates inflammations of it, cures cramps and obstinate colds. It has been computed that every hour 36,000 pounds

pounds of water flow from this spring, containing 180 pounds of mineral particles ; in the whole year therefore 315,360,000 pounds of water and 1,576,800 pounds of mineral parts. In the year 1780, the persons that used these waters, amounted to 122, and the number of the frequenters has been annually much increasing ever since *.

3. A very good four-spring is also at the St. Peter's bath on the Terek. It arises quite close to the hot-spring, and contains principally Glauber's salts, with a slight ferruginous tincture, and a smack of a volatile poignant acid †.

4. The springs near Ekatarinenburg in the government of Perme. They are just 2 versts from the town, in the iron-works of Verchney-Isetsk. Their component parts are a solution of iron by the atmospheric acid and some selenite ; the taste is very inky, and the effect detergent and decomposing. The well has been lately made, and the waters are coming into general use.

5. A similar source is likewise at the iron-works of Kuschvinsk in the same government.

* For farther particulars, see St. Petersburg. Journ. parts ii. vi. and New Pet. Journ. 1782, book ii. p. 139.

† Falk, Beytr. book ii. sect. 12.

It has the same qualities with the last mentioned, and is used in the hospital of the place with benefit.

6. A four-spring near Pogromna in Dauria, which greatly resembles Seltzer water *.

7. Another of these four-springs is also in the iron-works at Kutomarsk in Dauria †.

3. *Bituminous waters.*

(*Naphtha sources.*)

1. On the stream Igar, 15 versts from Sergieffsk on the Samara, and others 40 versts from it. They yield considerable quantities of naphtha.

2. On the Terek, in the mountains about the warm springs at Baragun, near Deulet-Gueray, &c. and the sources of Tschetschengisk are particularly prolific. There arises out of holes in the argillaceous and sandstone soil a watery vapour smelling of naphtha, which collected in pitchers is so richly impregnated with naphtha, but still more with maltha, that the inhabitants take both and use the latter as tar. The earth hereabouts is all impregnated and black with maltha.

* Pallas, travels, part iii. p. 249.

† Georgi, part i. p. 344.

3. On the shore of the Volga near Tetyufchy and near Samarskoy, thick naphtha oozes out of the stony stratum.

4. On the mountain Irnek, on the kirghian and khivinschian frontiers, on the road to Ornburg black naphtha flows. A lake on the Sagris which falls into the Emba, is covered for a finger-thick with naphtha.

5. On the Sok *.

6. On the Caspian ; principally near Baku.

7. In Taurida. In the district of Perekop and on the isle of Taman, 20 versts south of the town of that name ; also at Yenikaly and in the Kuban.

8. On the Baikal : in various places.

4. *Incrustaceous waters,*

1. Which depose tophus calcareus, or foreign substances incrusted with calcareous particles, and also form stalactites. This kind of water is in great plenty, of which the tophus strata on the Volga, the Kamma, the Terek, the streams of the upper Sura, &c. and the many stalactites in the caverns of the Ural, the Altay, and other mountains are so many proofs ; also a petrifying spring to the right of the Volga near Du-

* For which see before in the description of the Ural mountains.

vobka, which in 30 years strongly impregnated a piece of timber with calcareous particles *.

2. Such as incrustate substances laid in them with iron-ochre, or convert them entirely into iron-ore. Neither are these uncommon, for instance the above-mentioned four springs at Olonetz, a spring near Verchneturinskoy-savod, one near Sufunskoy-savod, and one in the region of the Schlangenberg †.

Canals.

THE construction of canals was a principal object with Peter the great: some were even begun by his orders, but were afterwards left unfinished from the difficulties that arose in the progress of the work. Four particularly derive their origin from him, viz. 1. that to Cronstadt, which, after being carried upwards of two versts, was then abandoned. 2. The Ladoga canal, which in length is 104 versts, and 70 fathom in breadth. 3. A canal, along which, by means of some rivers, a communication is formed between Mosco and the Don. 4. That at Vishnei-Volotshok, by means of which a passage is had from the Caspian into the Volga; and thence, in conjunction with some rivers and lakes, into the Neva, and so into the Baltic.

* Falk, ubi supra, p. 5.

† Hermann's Statistische Schilderung von Russland, &c.
The

The late empress, from the very beginning of her reign, bestowed a peculiar attention to this important object, and actually caused three canals to be dug, besides those of Cronstadt and St. Petersburg; in order particularly to render far more commodious the passage from the Caspian into the Baltic than it is by the canals of Vishnei-Volotskhok; and then, by means of some rivers, to connect the Caspian with the White-sea. Several other plans have been proposed; and, among others, one to unite the Dniestr, the Dniepr, and the Volga.

Many other canals might be undertaken, for connecting rivers of various magnitudes together, which would greatly facilitate the transport of products from one place to another, especially to the sea-ports. Only, in some regions the expence would be too great; or the advantage, at least to them, would be beyond all proportion greater than the benefit to accrue from them. However, many canals might be cut highly favourable to trade where it has hitherto met with numberless impediments.

For instance, not more than two voloks * are to be met with between the Don and the Volga.

* A volok, in the russian language, signifies a small tract of land between any two rivers that run nearly in the same direction.

One is at Tzaritzin, where Peter the great had formed the design of making a canal of communication between these two rivers. The other volok is beyond Tscherdine, between the Kolva and the Petshora.

Almost all the rivers of Siberia disembogue into the Frozen-ocean. Not one of all that take their rise in Siberia, runs to the countries of the Mongoles, Bukharians, Kalmuks, and Tartars; whereas, many of those which rise in the Mongolèy, and the country of the Kalmuks, flow northward through Siberia. They are so commodious for navigation, that a vessel might go from them through Petersburg to Selenghinsk, were it not for only two voloks: one between the river Tschuffovaia and the Tagil, and the other between the Ket and the Yenissey; the latter of about 90 versts, and the former not so wide.

V I E W
OF THE
R U S S I A N E M P I R E.

B O O K II.

HISTORICAL VIEW OF THE NATIONS OF THE
RUSSIAN EMPIRE.

IN addition to the advantages derived from the natural situation of Russia, Nature has been no less bountiful to her in the inexhaustible sources of her products of every species. As a systematical survey of them would lead us beyond the bounds of our plan ; and, even with the most studied brevity, would only be a dry nomenclature, we shall here content ourselves with remarking in general : that the russian empire produces all the necessaries of life, and many of them in such superfluity, that, with a proportionate population and industry, she might be not only completely independent in regard to her
primary

primary requisites, but also entertain the probable hope of keeping the generality of trading nations in a constant dependence on her. The profit, employment, and manufacture of these natural stores by mechanical arts and traffic will be expressly noticed in the progress of this work; we therefore pass by these objects now, in order to give a completer knowledge of them, by briefly delineating the political distribution of the empire.

The whole russian state at present (1799) consists of FIFTY alike-organized provinces, which are called governments or viceroyalties. As in this distribution less regard was had to the superficial contents than to the population, so the areal dimensions of the governments are generally various; while their population, with a few exceptions, is pretty equal. Each government is again divided into several circles; some of the largest have also a farther distribution into districts. In each circle is a circle-town, where the circle-administration has its seat, and one of these circle-towns is at the same time the government-town, in which the governor-general and the principal officers reside, and by which the whole government is usually denominated.

Besides these fifty governments, belonging to the russian empire, are two more countries,
6 having

having a military-civil constitution, namely, the country of the Donskoy-Kozaks, and the country of the Euxine-Kozaks. Two-and-fifty provinces therefore, properly speaking, compose the russian empire; the georgian states Karduelia and Kakhetty, several petty districts of people, in the parts of Caucasus, with the country of the Kirghis-Kozaks, are to be reckoned among the countries under the protection and in the dependence of Russia.

Great part of the country now called Russia was in the period of remote antiquity inhabited towards the north-east and north, by a people of Finnish origin, perhaps descended from the antient Scythians. Towards the north-west, were tribes consisting of a motley race of Sauromates and grecian colonists; and from them are descended the modern Lithuanians, Lettovians, Livonians, and Courlanders; as were also the antient Prussians. The whole southern part of Russia, even to the Krimea, was for some time inhabited by Goths; and, between the Volga, the Don, and Mount Caucasus, dwelled a nation descended from the Medes, called Sauromates, that is, the northern Medes. In process of time, when nations of barbarians issued, one after the other, in swarms, from the east, and some of the different tribes of Goths had, since the middle of the

the

the third century, penetrated into the western regions of the roman empire ; part of the Sauro-mates found themselves under the necessity of retiring farther toward the north and the west. Even at that early period they had the same political constitution we still see prevalent among them. Each individual of the nation was either master or slave. Those who were of distinction among them, called themselves tribes, slaf, and slavnè, or noblemen ; whence again, all such as either were renowned for great atchievements, or only capable of performing them, were afterwards in like manner styled slavnè. Under this denomination it was that they became known to the Europeans, who were not till very lately acquainted with the particular tribes of those nations. These tribes had their appellation frequently from some river, town, or district. So the Polabes were named after the Laba, or Elbe ; Po, in the flavonian and rufian tongues, signifying near. The Pomeranians dwelt po moru, or near the sea. The Havelanians near the river Havel ; the Maroaro, or Moravians, or Marahani, on the banks of the river Morava. The Varnabi had once their residence near the Varnof, and the Polotzani on the shores of the Polota. In the
moun-

mountains* lived the Khrobates; the Tollenfians were named after the river Tollenſea, in Pomerania citerior, which empties itſelf into the Peene, near Demmin. From Sidin, or Sedin, the Stettin of the moderns, one tribe was named Sidinians; another from Britzen† Britzanians; from Kuſſin, a town ſubſiſting in thoſe early times, the Kiſſinians took their name, the traces of whom are ſtill to be found in a village near Roſtock, called Keſſen, or Kiſſin: and laſtly the Lutitzians were named after Loitz, on the river Peine. But there are alſo ſome names of theſe tribes which are original; for example, the Sorbs, or Serbs, the Tſchechs or Bohemians, the Lachs, Lechs, or Polachs, the Poles; and from the more modern Varagian Roſſi, the Ruſſians, about the year 862, received their name. The ſtorm, which, in the train of Attila, from the year 435 to 456, ſpread terror and deſtroy over the earth, was but of ſhort duration. In the mean time came the turkiſh tribes, which till then had dwelt in great Turkey ‡, and Turkiſtan (where is ſtill ſubſiſting, on the banks of the Taras, the town of Turkiſtan) and eſta- bliſhed new empires. The empire of the Vlagi, or Volochi, or Vologars, or Volgars, or Bul-

* Khrebet. † Treunbritzen. ‡ i. e. Bukharia the leſs.

garians,

garians, is in like manner called Great Bulgaria. It is situated beyond the Volga, on the banks of the Kama, of the Bielaia and the Samara: the empire of Borkah or Ardu, of the asconian Turks, extended on this side of the Volga from Uvieck, near Saratof, quite to mount Caucasus. One part of these were called Kumani or Komani, from the river Kuma, and their town was named Kumager *.

SECTION I.

1. *Slavonians.* 2. *Finnish nations.*

NO other country throughout the globe contains such a mixture and diversity of inhabitants. Russians and Tartars, Germans and Mongoles, Finns and Tunguses, live here at immense distances, and in the most different climates, as fellow-citizens of one state, amalgamated by their political constitution, but by bodily frame, language, religion, manners, and mode of life, diversified to the most extraordinary contrasts. It is true, there are some european countries in which we find more than one nation living under

* For more on this subject, see the History of Discoveries made in the North, translated from the German of Dr. John Reinhold Forster.

the same civil constitution, or where we still perceive evident traces of the former difference between the primitive and modern inhabitants; but in almost all these countries the dominant nation has in a manner swallowed up the conquered people; and the individuality of the latter has, in the course of some centuries, by insensible degrees, been almost entirely lost. Whereas in Russia dwell not only some, but a whole multitude of distinct nations; each of them having its own language, though in some cases debased and corrupted, yet generally sufficient for generic classification; each retaining its religion and manners, though political regulations and a more extensive commerce produce in some a greater uniformity; the generality of the main stems, in short, bearing in their bodily structure, and in the features of their faces, the distinctive impression of their descent, which neither time nor commixture with other nations have been able entirely to efface.

This extraordinary variety of inhabitants, while it gives great attraction to the study of russian statistics, adds likewise to its difficulties. Instructive and interesting as it is to the reflecting observer, to trace the human being through every degree of civilization, in the several classes of manners, and in all the forms of civil society; yet toilsome and dry is the occupation which
mult

must necessarily precede that satisfaction : to investigate the origin of these stems in their first shoots, and to discriminate their gradual progress to larger societies and states from the chaos of dark and fabulous times. The united efforts of the numerous inquisitive historians, both foreign and domestic, who have employed themselves on these subjects, have hitherto been able to cast but a feeble light on the origin of the greater part of the nations of the russian empire, and the researches of many of them have been lost in traditions, the romantic obscurity whereof has left us no hope of arriving at the truth. Without pretending to surmount these difficulties, on which historical sagacity has hitherto been exerted without any remarkable benefit to the knowledge of nations, and the discussion of which would lead us too far beyond the bounds we have marked out to our plan, we will merely attempt to arrange the particular results of the most competent inquirers into a consistent line which may guide us through the labyrinth of the intricate reports of the middle ages, and convey us into the more luminous regions of authentic history. — We will trace the existence of each nation which we find within the limits of the russian territory to its first historical appearance ; and these efforts will enable us to sketch out a genealogical system of the nations that inhabit that

that empire. Where history leaves us, we will seek in the analogy of languages means for the classification of collateral tribes, hoping thus to deduce as complete and regular a view as possible of all the nations of the russian north, according to their real or probable derivation, their most remarkable events and catastrophies, their population and the place of their present abode *.

Besides

* For the most established and the most memorable facts from the antient history of the russian nations, it is proper here at setting out to note the authorities which are chiefly used. These are, besides several scattered essays in larger works or periodical publications, principally the following : Plan of a topographical and physical description of the russian empire, undertaken by the imperial academy of sciences; in the St. Petersburg Journal, vol. vi. p. 323. Georgi's description of all the nations of the russian empire. Schlötzer's general history of the north, or the 31st vol. of the german universal history. Pieces relating to russian history, by her majesty the empress Catharine II. Schlötzer's dissertations on the russian annals (1). Dissertation sur les anciens Russes, par Strube de Pyrmont. Kratkoie vedeniye v bytopissaniye vsroff. imp (2). Thunmann's unterfuchungen ueber die alte geschichte einiger nordischen volker. Yannaus pragmatische geschichte von Liv. und Ehstland. Muller's sammlung russischer geschichte. Gat-

(1) Translated in the Selections from foreign journals, &c. printed for Debrett, 1797, vol. ii. p. 293 & sqq.

(2) By professor Besack.

Besides the Slavonians, to whom the predominant nation belongs, there are in the russian empire three main national stems, whose original identity is historically placed beyond all doubt, and among whom several other tribes are to be counted as relative or collateral branches, namely, Finns, Mongoles, and Tartars. To these may be added the Tunguses; who, though not a primitive stock, yet are the only one of their race in Russia. A sixth class is formed by those nations, with whose language and history we are still too much unacquainted for being able with any degree of certainty to assign them a place in the national system at large; and this classification is terminated by the dispersed multitudes of european and asiatic nations who have settled here and there in particular provinces: either as conquerors with violence, or voluntarily and on invitation as colonists: but their number is too inconsiderable for having any pretensions to be treated of under a separate head.

terer's versuch einer allgemeinen Weltgeschichte. Thunmann's untersuchungen ueber die geschichte der oestlichen europaeischen voelker. Peyssonel's verfassung des handels auf dem schwartzen meer. Pallas sammlung historischer nachrichten ueber die mongolischen voelkerchaften. Fischer's sibirische geschichte. The travels of the St. Petersburg-academics, &c.

1. The

1. The SLAVONIAN stock is one of the most remarkable and most widely extended in the world. Next to the Arabians, who formerly prevailed from Malacca to Lisbon, there is no people throughout the globe who has diffused its language, its dominion and its colonies to so surprising an extent. From the shores of the Adriatic, northwards as far as the coast of the Frozen-ocean, and from the shores of the Baltic through the whole length of Europe and Asia, as far as America and to the neighbourhood of Japan, we every where meet with slavonian nations, either dominant or dominated. — The origin of this numerous and powerful race is lost in the night of antiquity; it was perhaps comprised by the Greeks and Romans under the comprehensive and indefinite denomination of Scythians and Sarmates *. Poland, Prussia, Lithuania, and the southern parts of Russia

* In the year 495, the Heruli, being routed by the Longobards, marched through the territories of the Sclavi; and this is the first event in which this nation is mentioned in history under that name. Indeed the name Sclavi appears in the armenian historian Moses of Chorena, who is commonly thought to have lived in the middle of the fifth century, and in the epitomiser of Strabo, probably also in Ptolemy; but the passages of these historians that relate to our subject deserve a more accurate investigation. — Jordanes and Procopius, two contemporary historians of the sixth century, are the first by whom they are distinctly named. *Schlotzer.*

were probably the antient seat of the Slavi. Hence they spread themselves to Dacia, to Germany, and to the countries lying beyond the Danube; these regions were the cradle of those countless swarms which over-ran the half of Europe and Asia, or reduced themselves to subjection.

Towards the middle of the fourth century all the flavonian races were subdued by Ermanarik, and incorporated with the Ostrogoths into one government. Soon afterwards both the dominant Ostrogoths and the servile Slavi were rendered subject to the victorious Hunns. A century had scarcely elapsed when these disturbers of the world were either exterminated on the one hand by the gothic Gepidi, or on the other driven to the farther side of the Danube by the finnish Ungres and Bulgarians. The Slavi began to shew themselves in Dacia, pressed between the Ungres and the Gepidi, and took up a part of the northern shore of the Danube. Here we find them entering, as a peculiar people, among the barbarians who menaced from the north the downfall of the declining roman empire*; hence they plundered the roman provinces;

* In order not to leave the curiosity of some readers entirely ungratified, we will here observe, that the Slavi on the Danube, during a course of several centuries played no insignificant

provinces; hence they rushed like a torrent on the country of the Gepidi, who were almost entirely extirpated by the Longobards and Avari. The Avari arrogated to themselves a sort of sovereignty over the various flavonian races, and occasionally extorted from them a tribute; but this people too was at length swallowed up by the Bulgarians, who now, by these accessions of people, extended themselves over all Dacia. Forced by their oppressions, the greater part of the dacian Slavi abandoned their dwellings, and retreated (probably about the middle of the seventh century) from the Danube to the north. Some tribes withdrew to Poland, others to

nificant a part among the barbarians, who, by their predatory incursions accelerated the downfall of the grecian empire. Their first attacks were made in the time of Justinian I, about the year 527, but they returned, not long afterwards, to their seats on the northern side of the Danube, and, not till towards the year 602, began to settle on the southern side of that river. — A complete history of the danubian Slavi, from the year 495 to 1222, is given by Mr. Stritter of Mosco, from the byzantine writers, in his celebrated work: *Memoriæ populorum, olim ad Danubium, pontum euxinum, paludem mæotidem, Caucasum, mare caspium, et inde magis ad septentriones incolentium, e scriptoribus Historiæ Byzantinæ erutæ & digestæ*. Whoever finds these accounts too dry for his perusal, may read an entertaining account of the Slavonians of those times, and their intercourse with the state of Rome, in the immortal work of Mr. Gibbon.

Russia, and a part of them remained on the Danube.

Thus were these countries peopled by slavonian colonies, who were ever spreading farther and wider, founding governments in every place, and occasioned the most signal revolutions in the north of Europe. All the branches of this grand stock, who have formed peculiar states, may be ranged by their present condition in seven classes, that is, into russian, polish, bohemian, german, illyrian, hungarian, and turkish Slavonians. Three of these branches we find in the spacious territory of the modern russian empire: the Russians, the Poles, and the Serbians.

1. The aborigenes of Russia were of two races: FINNS and SLAVONIANS. The former possessed the regions of the Volga and the Duna; the latter dwelt about the Dniepr and the upper Don. The main seats of the Slavonians were properly in Lithuania and Poland; only one arm of that body extended over the Dniepr. When the danubian Slavi, being cruelly oppressed by the Bulgarians, fell back to the north, they spread themselves farther on the Dniepr, where they constructed Kief. One colony of these Slavonians penetrated up the Volkhof and laid the foundations of Novgorod. After a dark period

period of more than a hundred years, this latter race again appear amidst the finnish nations, and at this point of time it was that the russian state received its origin from the Scandinavians or Northmanni.

Shortly after the settlement of both these flavonian races on the Volkhof and the Dniepr two hostile nations arose and became their oppressors: the Chazarès from the Euxine, and the Varagians, Varingians or Northmanni * from the

* As the Varagians had so considerable a share in founding the russian state, it will perhaps be not unacceptable to find here a compendious view of their pedigree and fortunes, The Northmanni, who in Russia were called Varagians or Varingians, were a northern people of gothic descent, a warlike multitude, composed of Danes, Swedes, Norwegians, who, perpetually in quest of adventures, established governments in the western and eastern parts of Europe, and produced revolutions, especially in the south, the consequences whereof extended throughout our quarter of the globe. The first trace of their maritime expeditions is discoverable about the year 516; though it is probable that they carried on their piracies much earlier, and were only comprehended under the name of Franks, who already appear under the emperor Probus as enterprising mariners. In the year 795, they are first perceived in Ireland. About the year 813, they began their incursions by the Elbe, into Friesland and Flanders; in process of time they proceeded to Aquitaine and along the Seine; about the year 840, they

the Baltic. Under various turns of fortune, of which but little is known with certainty, both races obtained their independence till the ninth century; when the Varagians conquered from the Russians, a kindred north-gothic people *, the

they ravaged France, and in 857, made the conquest of Luna, and afterwards of Pisa in Italy. In the year 862, Rurik founded the russian monarchy; about the same time too, a Norrmann of a similar name, Rorich, became famous in the history of Holland. Soon after this, Oskold and Dir founded another sovereignty at Kief. In the tenth century Ragnvald reigned in Polotsk, from whose daughter Rogned the russian annals derive the grand-dukes of Lithuania. About the year 1000, they take Apulia from the Greeks, and Sicily from the Arabians. They gave Normandy its name, after Rollo had wrested that country from the kings of France. Even the conquest of England by the Danes, in some degree forms a part of their history. *Allgemeine nord. gesch.*, p. 220,

* The earliest mention of this name is in the Bertinian Annals, at the year 839, therefore prior to Rurik's reception in Novgorod. *Dissert sur les anciens Russes*, p. 1. — However historians may have hitherto differed in opinion concerning the origin of the Russi, Rhotzi, or Russes, yet at present the generality and the most authentic are agreed in this, that they belong to the varagian race, and therefore were originally Norrmanns or Scandinavians. — Thunmann affirms them to be Swedes descended from Scandinavians, and spoke the scandinavian tongue. *Untersuch. ueber die gesch. der ästl. europ. völk.*, p. 374.

The

the modern districts of Reval, St. Petersburg, and Archangel, and subjected the Slavonians, Krivitsches, Tschudes, Vessenians, and Merænes *

to.

The situation of the antient Ryssland or Rusland, may be ascertained by the towns which are mentioned by the chronographers. The Russians, for example, possessed Rotala, which lies in the present government of Reval; Aldenborg (now old-Ladoga) which lies in the government of St. Petersburg; Alaborg, which is in the government of Olonetz; and Holmgard, (now Kholmogor,) which is in the government of Archangel. *Bitopissaniye*, &c. p. 2.

* These tribes were partly Slavonians and partly Finns. To the former belong, 1. the proper Slavi or Slovænians, who dwelt on the lake Ilmen, in the present government of Novgorod. Of all the flavonian races which settled in the present territory of Russia, this was the only one that retained its primitive denomination; the rest took their appellation from the residences they chose. Among those who settled about the Dniepr, and whom we comprehend under the general denomination of Kievian Slavi, some were called Polænians (from field, plain; in russ Pole), others Goranians (from Gora, a mountain), Drevlianians (from derevo, a tree, a forest), Severians (from sever, the north); Polotschanians, after the river Polota; Sulanians, after the river Sula; Bugschanians, after the river Bugue, &c. — Under the name Slavonians or Slovænians, in Russia were only known, those who lived about Novgorod. 2. The Krivitsches, a flavonian stock, at first dwelling between the rivers Pripet and Dvina, and who afterwards spread themselves farther up the rivers Volga, Dvina, Oka, and Dniepr, and

to a tribute. The Russians retired to Finland and Karelia; but the Slavonians, in conjunction with the rest of the aforementioned nations, drove out the Varagians, and formed themselves at the lake Ilmen, near Novgorod, into a federative democratical republic. As the defects of this constitution soon gave occasion to intestine disturbances, the five united nations came to the resolution of calling in the Russians to restore tranquillity to their country, and to give them protection; in order to which they offered voluntarily to resign the sovereignty to them. The

and thence obtained their name (from Krivi the upper part). After these old slavonian people the Lettish to this day denominate Russia. The region inhabited by the Krivitsches (now the governments of Polotzk, Smolensk, and Minsk) fell more recently under the dominion of Lithuanians, and was named thenceforward Lithuanian-Russia, Rus Littefska. By the polish partitions of 1773 and 1793, the russian empire got back these long-withholden provinces. — To the finnish nations belong: 1. the Tschudes, as the Russians are wont to call them, and under which the Finns and Esthonians are especially implied, who had their seats in some districts of the present governments of Pskove and Reval. 2. The Vessenians, on the Bielb-Osero, in the district of Novgorod. 3. The Mères or Meræniens, in the parts where are now the governments of Vladimir, Yaroslaf, and Kòstroma. These are probably the present Mordvines.

russian

russian prince Rurik, with his brothers Sineus and Truvor, accepted the invitation. Rurik collected all his people together, came in the year 862 to the mouth of the Volkhof, and took upon him the government of the new-erected state, which from the very first comprised six several tribes, flavonian, finnish, and varagian, extending over the regions of the present governments of Riga, Reval, Polotsk, Pskove, Viborg, St. Petersburg, Novgorod, Smolensk, Olonetz, Archangel, Vladimir, Yaroslaf, Kostroma, and Vologda.

Though the Varagians composed the predominant, and under Rurik the most consequential part of the people, (which is principally proved from this circumstance, that in the history of his time only varagian names are mentioned,) yet Slavonians and Russians were soon blended into one nation; and though the name of the latter was transferred to the whole nation, yet the flavonian language and manners retained the superiority, as that people were considered as the predominant part both in numbers and in civilization.

Rurik, the proper founder of the flavonian state, immediately took up his residence at Staraya Ladoga, and styled himself grand-prince, thereby
to

to denote his supremacy over the subordinate princes. By a kind of patrimonial constitution the grand-princes had the right of granting to their sons or younger brothers distinct principalities. This right Rurik, as the eldest, exercised with his two brothers. Sineus received Bielo-Osero, and Truvor Isborsk, for their residences, as chief towns of dependent countries. Both died childless one shortly after the other; Rurik reunited their territories with his own; and, in the fourth year of his reign, removed his residence from Old Ladoga to Novgorod, which from that time forward became the capital of the russian monarchy.

Scarcely had RURIK elevated himself sole-ruler of the novgorodian state, when the Slavonians dwelling on the Dniepr, being oppressed by the Chazares, applied to Rurik, requesting him to give them a prince of his race to rule over them. Rurik sent them his stepson Oskold, who subdued the Chazares, and founded at Kief the second slavo-russian dominion, dependent on the novgorodian empire,

The progress of the russian monarchy is so fertile in great events, and runs so deeply into the history of the neighbouring nations, that the
relation

relation of them can be no object of this historical sketch. We will therefore pursue the chief nation alone in the most memorable periods of its history, in order to enable us to see at one view the gradual course of the formation and enlargement of the present extensive and powerful empire of Russia.

OLEG, the immediate successor of Rurik, who reigned as guardian of his nephew Igor, united Kief, which would now no longer acknowledge the supremacy of the novgorodian grand-princes, completely with the russian territory, and elevated this second flavonian family-seat, to be his residence and the capital of the country. — Under these and the following reigns the power of the empire was rapidly increasing. Russian armies appeared before the gates of Constantinople; a multitude of nations were rendered tributary; the Russians carried on a regular commerce to the coasts of the Euxine; they built cities, embellished and gave laws to such as were already in being. — On the death of VLADIMIR the great, in 1015, who embraced the christian religion, and introduced it into Russia, this hasty progress of the nation was checked by the partition of the state among his twelve sons.

This

This pernicious policy, which was even continued by his successors *, had for its conse-

* The grand-princes, as patrimonial lords of the country, granted to their sons, younger brethren, and other relations, distinct principalities ; and this not only in their life-time, but even by testamentary bequests. The several princes were bound to do homage to the grand-prince, as their father or elder brother, and were his principal vassals. The grand-prince had the right to resume the principalities which he had bestowed, and to translate these his vassals, especially when they were his sons, from one principality to another. Upon the decease of the grand-prince, from whom a distinct prince had received his principality, it became hereditary, and was regarded as the patrimony of the prince and his family ; by which means every separate prince acquired nearly as much power in his territory, as the grand-prince had in the grand-principality. — After the death of Igor or George I. in 1157, the princes of Vladimir, on the Kliasma, emancipated themselves entirely from the supremacy of the grand-princes of Kief, and thereupon assumed the title of grand-princes. This example was soon followed by the princes of Vladimir on the Bogue, Galitsch on the Dniestr, Smolensk, and Tschernigof ; and from the time of Yaroslav II. who died in 1246, the same was done by all the separate princes who had received the patent of their principalities from the tartarian khans. — Simeon the proud, however, who died in 1353, made his brothers not only vassals, but subjects : Dmitri Donskoi publicly required all the russian princes to pay him unconditional obedience ; his son Vassilly forced the princes of Suzdal and Nishney-Novgorod to unlimited submission, and Ivan I. at length restored the complete sovereignty and indivisibility of the empire.

quences

quences devastation and war. Russians took up arms against Russians, brethren against brethren; and amidst these bloody contentions, which were still the more destructive as either party strove to strengthen itself by calling in the aid of foreigners, arose a *third* powerful state: White Russia or Vladimir.

Russia had now three independent grand-principalities within its borders, besides several smaller states arisen by partitioned lines. Vladimir was the most powerful of them, and its sovereign was considered, during the following period of the tartarian oppression, as the proper and only grand-prince of Russia. At first Susdal was the residence of this state, afterwards Vladimir, and at length this honour fell to the lot of Mosco, which city George I. had founded in the year 1147. — Vladimir, as well as Kief and Novgorod, which latter grand principality had adopted a sort of monarchic-republican form of government, maintained an uncertain and often controverted supremacy over the smaller principalities, of which several from time to time had sprung up, and which, unmindful of their common lineage from the house of Rurik, lived in a state of perpetual warfare.

This state of the nation must have greatly facilitated the means of its subjugation to any foreign

reign

reign enemy; how much more to a wild and warlike nation, which, by the magnitude and rapidity of its conquests, was already become formidable to all Asia. Mongoles and Tartars, who, under their khan Tschingis at the beginning of the thirteenth century had united themselves into a powerful state, and had brought into subjection the greater part of Asia, now, in 1237, under the conduct of his descendant Batu, khan of Kaptschak, fell upon the southern Russia, where, after repeated predatory incursions, they founded a formal sovereignty. Kief fell first (1240) under their power; the grand-prince of Vladimir did homage to the khan of Kaptschak, and the lesser princes voluntarily followed his example. The Tartars now slackened their conquests, in order to turn them to greater advantage: they numbered the people in the principalities, imposed on them a heavy tribute, and thus riveted the oppressive yoke of foreign sovereignty which the Russians bore for upwards of two hundred years.

During this melancholy period, the grand-prince of Novgorod, Alexander, honoured with the surname of Nefsky, made himself famous by the victory which he obtained over the Swedes on the banks of the Neva, and another in Livonia (1250) over the knights of the Teutonic order.

order. On the other hand Kief was lost to the russian territory (1320) with the greater part of southern Russia, and fell to Gedimin, the heroic grand-prince of Lithuania, who ravished this beautiful spoil from the Tartars. Smolensk, Polotsk, Tur, and Vitebsk, had already fallen under that supremacy. Vladimir, the capital whereof in 1328 was transferred to Mosco, continued, notwithstanding its being a fief to the Tartars, to be the mightiest of all the principalities; and the free-state of Novgorod, which was secured by its distance from the oppressions of the Tartars, was growing rich amidst the general calamity, by commerce, and even spread its conquests northwards over several neighbouring regions.

The partition of the russian empire, and the general confederation of the mongole-tartar nations were the causes that co-operated to the subjugation of Russia; an opposite mode of conduct liberated the Russians, and cast the yoke which they had so long borne back upon the necks of their former conquerors. Oppression and despair at length combined the russian princes in one common sentiment: several of the tartar hordes had made themselves independent, and internal disturbances and bloody contests completed the ruin of others.

Such was the situation of things, when Ivan I. in 1462, ascended the throne at Mosco. This

grand-principality had, even under the pressure of foreign supremacy, collected force for opposition. The principalities of Suzdal and Nishney-Novgorod were already in union with it: the princes of Pskov and Tver acknowledged it paramount, and the republic of Novgorod at least did not refuse its submission. These means and the personal character of Ivan decided his brilliant lot; that of being the restorer of the independence of his country, and the founder of the new russian monarchy.

Ivan had reigned fourteen years, when he refused obedience to the Tartars, and justified this daring step by victories which gained him the tartarian kingdom of Kazan, and made its sovereign his tributary vassal. The republic of Novgorod, which strove to maintain its independency under lithuanian protection, submitted in 1477 to the force of his arms. A similar fortune befel the principalities of Pskov and Tver. Lithuania lost a considerable part of its territory. The princes of Severia voluntarily submitted. The teutonic order in Livonia alone withstood the increasing power of Ivan.

Under his successor, indeed, the rising monarchy lost for a short time the kingdom of Kazan, but in return Smolensk was incorporated again into the russian state. — Ivan II. at length burst the last shackles of the mongole-tartarian sovereignty,

teignty. The entire conquest of the kingdom of Kazan was completed in seven years; the capital of it surrendering in 1552. Two years afterwards Astrakhan became a russian province. Hence Ivan pressed forward into Caucasus and subdued the whole Kabardey. On the other hand, his plans of conquest were frustrated in Livonia, which he was forced to relinquish after a contest of twenty years attended with numberless cruelties. The osmanian Turks, in conjunction with the Tartars of the Krim, fell upon Russia and ravaged its capital; but these disasters were greatly overbalanced by the opening of a channel for commerce by sea by way of Archangel, and by the conquest of Siberia, which date their commencement from the reign of Ivan, and were slowly but firmly completed under his successors.

By this conquest, for which Russia is indebted to a bold and successful robber, the monarchy extended its dominion over an immense tract of country, rich in the noblest productions of nature, and inhabited by a multitude of nations till then unknown. — Ivan's successor, Feodor, abandoned his claim to Esthonia, and obtained in return from Sweden a security to his possessions of Ingria and Karelia:

By Feodor's death in 1598, the dynasty of Rurik was extinct. During the interim till the

election of a new tzar of the house of Romanof in 1613, the empire was a prey to confusion and desolation. The well-known events of the pretenders under the name of Demetrius had implicated the Poles and Swedes in the internal affairs of Russia; and Mikhaila Romanof could only by large sacrifices purchase the repose of his empire. He was obliged to relinquish Ingria and Karelia to the Swedes, and Smolensk, Severia, and Tschernigof to the Poles.

This was however the last misfortune that diminished the power of the russian empire. From that period to the present day, Russia has not only been regaining its antient possessions, but so far extended and enlarged them, that the present circumference of the empire knows of no parallel in the history of the world.

Alexey, the successor of Mikhaila, not only reconquered the countries relinquished by his father to the Poles, but reduced also Kief and the Ukraine on the eastern side of the Dniepr, in 1655, to a reunion with the parent-state of the slavo-russian nation. — His son, the immortal Peter I. the creator of modern russia, acquired to his empire in 1721, by a twenty years war with Sweden, the provinces on the shores of the Baltic, which had been for so many centuries the source of bloody contentions among the northern powers: Livonia, Esthonia, Ingria,

Ingria, and a part of Kexholm and Karelia, were subjected to the russian sceptre, and procured to the empire, besides incalculable advantages to commerce, a firm and respectable footing among the chief european powers. — A second acquisition of the persian provinces of Daghestan, Shirvan, Ghilan, Mazanderan, and Astrabat, was, after thirteen years possession, voluntarily abandoned.

Catharine II. brought aggrandizement to Russia within and without by a reform of its government, and several successful wars. She obtained from the porte, by the peace of Kutshuk-Kainardgi in 1774 the possession of the city of Azof, with the territory belonging to it; and for the security of the russian navigation on the Euxine, the forts of Kinburn, Kertsch, and Yenicaly in the peninsula of the Krimea. A few years later, (1783,) the whole provinces simply by a treaty became a russian government; and in its present denomination the antient name of the Tauridan Chersonese is restored. In virtue of the same convention Russia enlarged her borders to the south by the Kuban, where now the caucasian mountains form the boundary of the russian dominion. In a second attempt to abate the preponderant power of Russia, the porte once more submitted, and was obliged to pay for the unfortunate termination of the quarrel

by the surrender of a considerable tract of country on the shores of the Euxine, between the Bogue and the Dniestr. — On the other side wretched Poland, by a surprising vicissitude of fortune, paid dearly for the injuries which Russia had formerly sustained from this once powerful state. In the famous partition which first reduced the national imbecility and political nullity of this republic to an almost incredible proof, Catharine obtained for her share in 1773 the four lithuanian voivodeships of Smolensk, Vitepsk, Mstislaf, and polish Livonia, with a part of the voivodeships of Polotsk and Minsk. The late and sudden attempts, through favour of temporary circumstances, to withdraw from under the russian influence, and to restore the sufficiency of the nation by a new constitution, involved the exhausted republic in an unprosperous war, which ended (1793) in the loss of the fine and fertile provinces of the Lesser Poland and Lithuania. The last and desperate exertion of the Poles was at length attended by the total dismemberment of the country; the capital of the kingdom fell into the hands of the Russians; the political existence of the republic was annihilated, and the last vestiges of it were lost (1796) in the confines of the bordering states. — One consequence of the annihilation of Poland

land was the acquisition of the duchies of Courland and Semigallia, including the circle of Piltēn, which on the dissolution of their feudal connexion with the republic, by a resolution of the estates of the country, submitted themselves unconditionally in 1795, to the sceptre of the empress*.

While Catharine the second was augmenting the power of her empire on one side by conquests and treaties, she strove on the other to promote the same object by the mild authority of her laws, and the methods of civilization. Compelled by the exigences of his situation, the mightiest of the princes of Caucasus, the tzar of Kartuelia and Kakhetty put himself under the

* According to an authentic estimate, published in 1796, by Major Oppermann, the acquisitions made during the reign of Catharine II. are thus given :

	Square versts.	Inhabitants of both sexes.
At the first partition of Poland		
in 1773 - - - - -	76,558	1,226,966
From the porte in the years 1774		
and 1783 - - - - -	113,100	171,610
From the porte in the year 1791	23,053	42,708
At the second partition of Poland, 1793 - - - - -	202,383	3,745,663
By the subjection of Courland -	16,273	387,922
At the third partition of Poland,		
1795 - - - - -	94,645	1,407,402
Total	526,012	6,982,271
Y 4		protection

protection of the russian empire, by acknowledging in 1783 the supremacy of its monarch. Catharine invited people from all countries to come and settle in her dominions, and thus established numerous colonies. She reduced a multitude of tributary nations dwelling in the heart of Siberia to a complete submission to her laws. She set on foot and encouraged several voyages of discovery, which obtained for the russian empire a new sovereignty in the eastern ocean, and on the western coast of America.

It appears, then, from the concurrent testimonies of history, language, and physiognomy, that the Russians are of flavonian origin, and consequently are related to the Poles, the Bohemians, the Slavonians, and other nations of the north. At the time of the great emigrations from the east, in the fifth century of the vulgar æra, being disturbed in their abode on the Danube by the Bulgarians and Valakhians, they dispersed themselves various ways; some marching to the Dniepr, where they built Kief, others bending their course to the Volkhof that flows into the Ladoga lake, and there laid the foundations of Novgorod. The latter colony fell under the sway of the Varages; by whom they were named Russi, and their country Russia or Rossia, which appellation they adopted themselves.

selves. Both the flavonian colonies were democracies; but their regent Rurik, in the year 862, made them a monarchy, which soon extended its limits far and wide. Towards the close of the tenth century, Vladimir introduced the ceremonies of the greek religion, to which he made those of the pagan give place. The subsequent partition of the empire among several princes was favourable to the incursions of the Tartars; and the thirteenth century saw Russia in subjection to Baaty, the khan of the Golden Horde, and his descendants, and Kief submissive to the yoke of the Poles. In the latter half of the fifteenth century the grand duke Ivan Vassillievitch the first very much curbed the Tartars; and about the middle of the sixteenth century Ivan Vassillievitch the second overturned the tartarian empire, and made its kingdoms of Kafan and Astrakhan tributary to his sceptre. He extended the boundaries of his dominion to the foot of the caucasean mountains. In the year 1578, the conquest of Siberia was begun under the auspices of the grand duke Feodor Ivanovitch, by the don-kofak Yermak Timofyef, which was continued during the following reigns in the seventeenth century to the shores of the eastern ocean and the banks of the Amoor.

With

With the commencement of the present century, Peter the great began to reform the political and moral condition of his empire, made discoveries in the northern and eastern oceans, by which he enlarged his dominion almost to Japan and the american shores, and extended the boundaries of the empire towards Sweden and Persia. It was reserved for Catharine the second to prosecute the plans of Peter ; to extend the limits of the empire towards Poland ; to give efficacy to the moral improvement, the prosperity and the happiness of the people ; and by wholesome laws, by the institution of seminaries of learning, to transmit the energy and the glory of her reign to future generations.

We have already seen the prodigious extent of the empire. But notwithstanding the great dispersion, and the consequent diversity of countries, climates, and situations, the people have far more resemblance in point of person and manners than those of different nations in smaller states. Russians about Novgorod, Astrakhan, Archangel, Tobolsk, Yakutsk, are not so different as Germans from the various circles of that less extensive empire. The uniform, simple, natural mode of life, a mind exempt from care, and a sameness of religion, particularly from their

their influence on the diet, seem to be the principal causes of this little alteration.

The russian language is an improved dialect of the flavonian, which, with its characters, is still in use in the offices of religion. The russian alphabet has 41 letters, whereof some are only notes of accent in pronunciation. The language is rich in words, soft, expressive, and requires great pliancy in the organs of utterance. Seminaries have been founded of old in the episcopal seats; gymnasiums and the universities of Kief and Mosco are foundations of great antiquity. There was, however, a deficiency in schools; and therefore the late empress was constantly adding to their number. Besides these, here are institutions for the education of the military and the nobility, and for young ladies of quality; an academy also of sciences, and another for the study of the arts, which were entirely re-erected on a magnificent plan by Catharine II. to whose munificence likewise the nation is indebted for the establishment of an academy for the improvement of rural economy, and a society for the cultivation of the russian language. In all the several institutions for the purposes of education throughout the empire, the pupils are found in every necessary
article,

article, such as board, lodging, food raiment, washing, &c. and are dependent on the foundation. Accordingly the entrance into these schools is accounted a service rendered to the country; and in reckoning the years of service, in order to promotion in rank, the years of attendance at school are always included.

The native Russians are of different stature; some are very tall, but few much below the usual height; several of them are remarkably strong limbed, in general they are lean, but well built. Those deformities which in other parts of Europe are mostly owing to the refinements of luxury introduced into education, are here but rarely seen: their mouth and eyes are small, the lips thin, the teeth even and beautiful, the nose, as every where, various, in general not large nor very aquiline; the forehead frequently low, and their aspect rather grave: the beard is strong and bushy, their hair lank, brown, flaxen, or red, seldom or never entirely black: in sight and hearing they are uncommonly acute: the organs of feeling, smell, and taste, are hardened, like all the rest of their body, by the rudeness of climate, and their manner of life. They are mostly of a sanguine choleric temperament, and vice versa, with a greater or less mixture

mixture of the melancholic, feldom of the phlegmatic, still feldomer merely melancholic or phlegmatic: in gait and action they are brisk, lively, and agile.

The complexion of the females is brunette, with a fine skin; many of them extremely handsome. As not any restraint is put upon their growth, their breasts and feet are large; the former far more full than those of the tartar women. Girls generally arrive early at maturity, numbers in their 12th or 13th year; but many of them lose all their beauty, after being married but a couple of years. The frequent use of the hot-bath promotes an early development, and as early a decay; and the hideous practice of painting spoils the skin. As the women, among the lower stations in general are kept on harder fare, and more accustomed to work than the girls, they are also more negligent of their persons.

The general disposition of the people is gay, careless even to levity, much addicted to sensuality, quick in comprehending whatever is proposed, and not less prompt in its execution; ingenious in finding out means of abridging their work; in all their occupations ready, alert, and dexterous. Violent in their passions, they easily mistake the golden mean, and not unfrequently rush

rush into the contrary extreme. They are attentive, resolute, bold, and enterprising. To trade and barter they have an irresistible impulse. They are hospitable and liberal, frequently to their own impoverishment. Anxious sollicitudes about the future here cause but few grey pates. In their intercourse with others, they are friendly, jovial, complaisant, very ready to oblige, not envious, slanderous, or censorious, and much given to secrecy. From their natural and simple way of life, their wants are few, and those easily satisfied, leaving them leisure for recreations and repose; and the constant cheerfulness of their temper frees them from troublesome projects, procures them satisfaction in all situations, keeps them healthy and strong, and brings them to an undisquieted, contented, brisk, sometimes a very advanced old age.

The nation chiefly consists of the nobility and peasantry; but we may also admit the burghesses, a class which was constantly more and more raised and encouraged by the late sovereign; to which may be added the kozaks as another order. The nobility is composed of princes*, noblemen, or boyars; and, in later times, of princes of the roman empire, counts, and barons. The nobles may be proprietors of land and people, and hold the highest offices in the

* Kniazi.

civil and military departments. The *dvorianini* are in a manner city-nobles, though not properly to be compared with the patricians of the cities of Germany. *Odnodvortzi* are the lowest class of noblesse, somewhat similar to the body-guards in Poland.

The burgher state, yeomanry, or commonalty, to give it somewhat of an english term, though neither of them will properly express it, is composed of the *Possatski* and *Rasnotshintzi*, who live in towns and villages, governed by their proper magistrates, whether as merchants or tradesmen. They are excluded from offices and posts of service or honour, furnish head-money and recruits, but cannot be vassals. By the uncontrolled freedom of trade that is enjoyed in this country, whereby any man may now follow one calling and then another, and not constantly adhere to either, merchants and handicraftsmen oftentimes live by agriculture alone, while boors subsist by trade and business. It is not usual for the latter to employ journeymen and apprentices, but only workmen and labourers. However, this class is so totally dissimilar from any order of men in our own or other countries, that a more circumstantial account of it is not here to be expected, but will more properly find a place in the following book.

By

By an edict of the year 1775, the merchants pay annually at the rate of one per cent. on their capital in lieu of the capitation tax, and are also allowed to pay money instead of the recruits they are bound to furnish; by which this rank has been greatly raised.

Of the peasantry, such as belong to the crown and the monasteries pay taxes according to the laws of the land, and are liable to the other duties imposed by the same authority; but they may be made over to particulars as donatives from the crown. Noble boors, as they are called, are the vassals of their lord, on whose arbitrary disposal they entirely depend, and according to the temper and disposition of whom, they are either treated with harshness or humanity; such as are happy enough to belong to kind and generous masters generally live comfortably enough, and some of them frequently get rich. From all of them such as are fit to be made soldiers are taken by lot as recruits. The peasantry are not bound to follow agriculture, the breeding of cattle, and the other employments of husbandry, but may strike into trade and pursue it either alone or in conjunction with their rural concerns, as they find it most beneficial or convenient.

The

The kozaks form a particular class originating from the peasantry. They live, exempt from taxes, in villages, forts, and petty towns, on the produce of their fields and pastures or the labour of their hands, furnish no recruits, are not given away as serfs, and enjoy other privileges. But they all serve as light horsemen, as early and as long as they are fit for it, providing themselves with horses, clothes, and accoutrements, and only receive pay when they are in actual service; of them, however, I shall speak more at large hereafter.

The trades carried on by the Russians are in general the same as are exercised in the other parts of Europe.

The inland commerce seems but small, as it is mostly conducted by shopkeepers and monopolizers, and the chief transport of goods by land is in caravans; it is nevertheless of great importance, by giving employment and sustenance to an innumerable body of people, by the great vent it procures for the products of nature and art, and by keeping the specie of the country in a constant and quick circulation. The petty merchants carry on their business by travelling from place to place about the country; and, therefore, on all occasions make speedy and frequent returns of their money. By their frugal manner of living, and by the hospitality

of the boors which every where prevails, the consumption even on long journies is but small; and thus it frequently happens that an apparently insignificant, unproductive traffic maintains and often enriches a number of families. Formerly all traffic was confined to the annual fairs. The merchants attended them with the commodities they had to dispose of, and bought with the money they got for them, or bartered them against, the products of those parts. For a long time past, every city, every town *, and many great villages, has its regular market, retaining at the same time its annual fairs. The market-places throughout the empire are, in their mode of construction uniformly the same: a quadrangular building of timber or brick, divided into shops, with a piazza before them for the convenience of customers in all kinds of weather. This frequently spacious and handsome structure, which, on account of the foreigners that sometimes hire shops in them, are called guest-courts †, and in regard to its uses, the buying or bartering-place, and where alone, and not in private houses, articles of trade may be sold, is usually built by the government or the magistracy of the place. At Irbit in Siberia, at Ekatarinen-

* Sloboda.

† Gostinoi dvor.

burg, and above all in the monastery of Makarief on the banks of the Volga, near Nishney-Novgorod, yearly fairs are held, which, for the amount of the turns and returns, may vie with the most noted in Europe.

The foreign commerce, till about the close of the fifteenth century, was but trifling, and almost wholly confined to Novgorod, which belonged to the hanseatic league. The Russians were unacquainted with their own products; and, living as they did, in the native simplicity of the children of nature, they had little occasion for articles from abroad. By imperceptible degrees the products of the country were understood and explored; and the introduction of a more refined mode of living occasioned a demand for foreign commodities. Under Peter the great, manufactories got up; the working of mines and all kinds of trade went on in a thriving state; and commercial regulations, duties, &c. gave commerce a proper direction, and secured the balance in their favour. It is a general practice with the merchants of Russia to be paid half of the price beforehand of the inland commodities which they buy up and deliver to foreigners, according to contract, for exportation; but to take foreign goods upon a year's credit. Foreigners therefore only gain when all goes right;

but the Russians always, let matters take what course they will. For which reason they willingly resign to foreigners the profits accruing from the transport, and have themselves but few ships at sea. The most considerable maritime commerce, as we have already seen, is at St. Petersburg and Riga, by way of the Baltic; at Archangel, on the northern ocean, &c. at Taganrok, on the Euxine; at Astrakhan on the Caspian, and at Kamtschatka, on the Eastern-ocean. The principal seats of the foreign commerce by land are the Ukraine, whence the Russian merchants visit the markets of Poland and the fairs of Germany; Orenburg, where a considerable trade is carried on with several Asiatic nations; and Kiachta in Dauria, where a great mercantile intercourse is held with China.

Manufactories of wool, cotton, silk, flax, metals, &c. paper-mills, wax-bleacheries, saltpetre and glass-houses, tapestry, and porcelain fabrics, with many other establishments of a like nature, partly belonging to the crown, but mostly to private persons, and especially the working of mines, employ an immense number of people, as well as artists and tradesmen, both in town and country. The products of these manufactories yield in no respect to the best
of

of other countries ; which however cannot always be affirmed of the works of the ruffian artizans.

As the free countrymen pay a tax not only for their fields, but also for their heads, they follow husbandry with that licence I mentioned before ; and many of them neglect it entirely in order to devote themselves to trade and business. The vassal-boors are employed, at the pleasure of their lord, either in country or city occupations, in manufactories and fabrics, the handicraft trades, or the mines. Agriculture, therefore, is not so generally the business of the peasantry in Russia as in other countries. However, on the whole it is carried on to so great an extent, as not only to furnish the nations of the empire that eat bread with that article, and the prodigious quantities of corn, at a very moderate price, consumed by the brandy-distilleries ; but also can export a great superfluity to foreign countries. Even from the 55th to the 60th deg. of north lat. in Siberia, are large tracts of arable land, mostly fertile, good crops of hay, and spacious forests. More to the north, cultivation is less to be depended on, and the whole system of rural œconomy is very liable to failures, and attended with great difficulties. Throughout Russia every village has its proper territory,

and every estate its allotted inclosures and commons *. In the less cultivated plains of Siberia, every man takes as much ground from the open steppes as he can manage. When such a portion of ground is exhausted, the countryman lets it lie fallow for a year or two, goes and turns up another piece, and so proceeds. Frequently these little strips of ground lie scattered at 20, 50, and even 80 versts distance from the village. The size of these fields is measured eastwards †, each of which being 60 fathom long and 40 wide; but in some parts, and all over the Ukraine, they are 80 fathom in length and 40 in breadth.

In Russia and Siberia they cultivate winter rye and summer rye ‡, winter-wheat § only in Russia as far as the Kama, summer-wheat both in Russia and Siberia; barley ||, spelt-barley, or bear-barley δ, plentifully in Russia; oats θ, in Russia and Siberia; few pease, still fewer vetches and beans; a great deal of buck-wheat ξ; in Siberia tartarian buck-wheat φ, millet ω, and the grain called panicum germanicum, only in Russia.

The manure depends much on the quality of the soil, climate, and greater or inferior popula-

* Tiaglo.	† Desettini.	‡ Rosh.	§ Pshenitza.
Yeshmen.	δ Polba.	θ Ovtzi.	ξ Gretshucha.
φ Polygonum tataricum Linn. rufs dikusha.			ω Profa.

tion.

tion. In well peopled regions the fields are dunged, because the husbandman can afford them but little respite; in fertile districts, however, of less numerous habitations, the good arable land endures no dung, requiring only after every 5 or 10 years use, 3, 4, or 5 years rest. Such powerful soil is found in different parts of the governments of Simbirsk and Penza, and about Ufa and Orenburg, as also in the southern steppes of Siberia, in the steppes of the Iset, the Ithim, the Baraba, about Irkutsk and in southern Dauria. The corn, after dunging, shoots up into high straw, and bears no solid ears. The most ungrateful soils are in Finland, Archangel, and the north of Russia, also the north and north-eastern parts of Siberia, in Kamtschatka, &c. They rarely yield an increase above threefold, and often entirely fail by the intenseness of the frost. The common land brings an increase of from 5 to 8 fold, and the fresh broke pieces in the above-mentioned steppes for some years successively will give an increase of 10 up to 15 fold.

The country people generally make use of the little russian or livonian one-horse plough *. For winter corn they plough twice, for summer corn

* Socha.

only once, and always quite flat. On some lands the corn is first strewn, then ploughed in, and harrowed smooth with an additional horse by the side of the other; by which method one man, with two poor feeble horses, can rid a good bit of ground. In woody districts the boors make new land in the swedish manner, by burning the forests, which if they let alone only for three or four years will all be covered over again with young trees and saplings.

The corn is cut with sickles *, in which employment the women and children assist. They bind it in little sheaves, set it up on the fields in shocks, and carry it home in winter on sledges. They then dry it in small wooden kilns †, with a smouldering fire, which they keep burning in a hole near the kiln, and the smoke whereof rushes into it. The corn thus dried, is spread upon the ice of a river, or a floor wetted with water, where it is threshed with light flails, then stored in little barns; and, what remains over from domestic uses, is conveyed to town, which is sometimes a hundred, nay two hundred, or even four hundred versts distant; where it is sold, not by measure, but by weight; rye and wheat as well as meal, in mat-sacks ‡ of 8 pood, and, especially in Siberia, at an inconceivably

* Serpa.

† Qvini.

‡ Kool,

low price. In Krasnoyarsk, for example, where it is particularly cheap, a pood of rye meal will sell for 2 to 3 kopeeks; or about a penny. Wheat flour 5 kopeeks, and so of the rest. In Irkutsk they are about three times dearer. — In many parts of the country every boor has his own water-mill * built by himself, with a horizontal water-wheel. In cold regions the straw is given to the cattle; but in the southern parts, where the cattle remain out all the winter, it is left to rot.

The villagers, with whom winter provender is a requisite, have hay-fields, bordering on the banks of lakes and rivers, in brakes and fens of the forests. In order to get rid of the old withered grass, the dry weeds, twigs, and light stuff, for warming the ground, and for manuring it with wood-ash, they set it on fire, as they are apt to do with the meadow-lands of the steppe in spring; though, on account of the great mischief occasioned by this practice to the forests, whole versts of them being frequently burnt at once, it is strictly prohibited. When the steppes and meadow-lands are thus on fire, the appearance they make, especially at night, is truly tremendous; the fire works its way in all

* Mutoska.

directions, frequently in lines that extend farther than the eye can reach, and fill the horizon in such manner with smoke, that one may look stedfastly at the sun the whole day through. The grass is mowed with very small scythes, and not before the month of July, that it may have time to reach its full growth and scatter its seed.

Besides corn, they grow flax *, in large quantities, chiefly on the shores of the Volga ; but most of all in the government of Yaroslaf, where one sees flax-fields, as elsewhere corn-fields ; the next in the produce of flax are the governments of Mosco and Kazan. It is thought that the common flax would not prosper in Siberia ; nevertheless some Poles, settled about the Irtysh and in Dauria upon the Selenga, cultivate valakhian flax with good success. The perennial flax, frequent in the south of Siberia †, is entirely unheeded, though it might be propagated to great advantage.

Hemp ‡ is indigenous in all the south and middle of Russia and Siberia, and in all these parts is propagated in great abundance, both on account of its material, for linens, sail-cloth, &c. and of the oil expressed from its seed, of which an amazing quantity is consumed for food during

* Len. † The *linum perenne* Linnæi. ‡ Kanapl.

the stalks, and, as well as the hemp itself, exported annually to a great amount.

Woad likewise grows wild in southern Russia and Siberia; it is gathered in the Ukraine and employed in staining and dying. It is also cultivated, but only in the government of Penza, and about the Don.

Tobacco is planted almost only in the Ukraine; but there in great abundance.

Hops are propagated by the villagers only in small quantities, in the governments of Kazan, Nishney-Novgorod, &c. and in Siberia in the province of Irkutsk. They are plentifully supplied with the wild sort, which thrives almost every where, among the bushes that grow about the banks of rivers, in brakes and low forests.

But little account is made of orchards except in the chief towns: however they are seen about the towns and villages, on the Volga from the region round Mosco down the river to Astrakhan, along the Oka, and the other rivers on the right of the Volga and the inferior parts of the river Ural, and all over the Ukraine, where orchard fruits are cultivated with great diligence and success. After all the attempts that have been made, no fruit-trees will thrive in Siberia. Something of a country wine* is made about

* Tshigir.

the Don, in Little Russia, on the Terek, and on the Volga, near Saratof, and especially about Astrakhan. Every villager has a little kitchen-garden adjoining to his cottage, particularly for the growth of cabbages, turnips, bete, carrots*, cucumbers, radishes, onions, and leeks, a few potatoes, some dill, gourds, and melons, indispensable to him on account of the numerous fast-days. Water-melons† are cultivated in surprising numbers in the south-eastern parts of Russia, from the Don to the Ural, especially on the Volga, in open fields got from the steppes, and are eaten either raw, or salted like cucumbers.

The forests, which are scattered sparingly about the southernmost parts of Russia, in the northern extremities above the 60th degree, are not seen. They are very common in the middle regions of Russia and in Siberia, and consist alternately of the fir‡, the pine§, the white fir||, the white and black poplarδ, the aspinε, the ashθ, the alderξ, the birchπ, the beechρ, the oakφ, the lindenω, the mountain-ash*, the

* Markovi. † Arbooses. ‡ Tal; *pinus picea*, and *pinus sylvestris*. § Sosna; *pinus abies*. || Pichta. δ Topol and Ofokor; *populus alba* and *populus nigra*. ε Offina; *populus tremula*. θ Yassen; *fraxinus excelsior*. ξ Olcha; *betula alnus*. π Beresa; *betula*. ρ Buk; *fagus*. φ Dup; *quercus*. ω Lipa; *tilia*. * Rebina; *fraxinus montan.*

elm *, the willow †, the palm-willow ‡, and several others: also in the caucasean mountains a great variety of fruit-trees, walnuts, and a kind of red wood §; in Siberia and in lofty mountains the larch ||, the siberian cedar ¶, and balsampoplar **, every where employing a great number of hands. Almost every villager is a carpenter, who builds his own house of barks or trunks of trees, makes wharfs on the navigable rivers, and whatever else belongs to the carpenter's trade. In the upper parts of the Oka and its superior rivers, and on the rivers to the left of the Volga, from the Unsha as far as the Kama, their chief employment is to strip the linden of its bark; the inner rind whereof †, they work up into baskets for sledges and carts, or make a light covering to their houses of it, to the sheds where the salt is kept in heaps; little huts for sleeping in upon the floats and vessels that go down the rivers, &c. All sorts of household cups, baskets, and the like, are made of it, in common use throughout the whole empire; and the making of what we call russia-mats §, trays, troughs, ladles, skimmers, spoons, &c. of the linden wood, is a

* Vies and Ilina; *ulmus campestris*, *ulmus sativa*, Miller; and *ulmus pumila*. † Tal and Iva; *salix triandra*, *salix pentandra*, *salix fragilis*, *salix alba*, *salix caprea*. ‡ *Salix arenaria*. § A species of the *rhamnus*. || *Livistona*; *pinus larix*. ¶ *Kedr*. ** *Topol*; *populus balsamifera*. † Lub. § Ragoshi,

great part of their business. A no less number gain their livelihood merely by preparing the birch-tar *, not to mention the occupation of so many in stripping all kind of trees of their bark for the several uses of the tanneries, particularly the youst-manufactories, and the burning of wood for charcoal, which is sent to the mines, and the different store-houses belonging to government.

In the breeding of cattle, the countryman is directed by climate and pasturage. In regions where the cattle must be stalled and foddered during the winter, the boor has at most but a scanty herd; where they can stay out in the open steppe all the winter, or the greater part of it; as in the south of Siberia, a man is often master of 300 horses, not fewer sheep, somewhere about half the number of horned cattle, always a few swine, and a great deal of poultry; sometimes geese and ducks.

The russian horses are of a middling size, with large heads, long flabby ears, not very handsome, but spirited, strong, and hardy. The horned cattle are little and brisk. The cows give but little milk, and that is poor and thin. In little Russia the oxen are used for draught. Every where about Archangel there is a fine breed of large cows, brought originally from Holland,

*. Dogat.

and are not found to degenerate in the least. The true russian sheep are distinguishable from the common sort by their short tail, not above the length of three inches. Their wool is coarse, but better than that of the broad-tailed kirghiftzian sheep, and would probably improve in some of the dry steppes. There are nowhere any particular sheep-folds; that is, there are no people who make it their sole business to breed and fatten them. It is never the practice to milk the ewes. Hogs, dogs, and cats, are of the ordinary kinds.

The poultry are housed all the winter in the cottage, under the hearth and the sleeping-benches, for the sake of having Easter-eggs. The goose is not in all places the common domestic species *; many keep wild geese †. They catch the young before they can fly, fatten them, and kill them in autumn. On the approach of spring they catch others, and thus save themselves the winter's feed. In Siberia at times one sees the white-headed little goose ‡ tamed. Besides, and instead of the domestic duck §, some cottagers keep the wood-duck ||, the red duck δ, the muscovy duck θ, and several other species. Doves and pigeons nestle about

* *Anser domesticus* Linn. † *Anser ferus* Linn. ‡ *Karfarka*; *anser erythropus* Linn. § *Anas boschas* Linn. || *Anas tadorna* Linn. δ *Anas rutila* Pall. θ *Anas mohchata* Linn.

the villages, without owners. Turkey-fowl are very common among the poultry in the southern parts of Russia, and wherever there is a good market for them in the large towns.

The culture of bees is indeed principally the concern of the Bashkirs in the Ural; but also is attended to in southern Russia by the Russian peasants, pretty well, and in the Bashkirian method.

In the northern districts of Russia and Siberia the chase is followed as a trade, particularly for those animals whose skins are used as furs, especially fables and grey squirrels, for the wear of the Russian gentry in town and country. They roam about in companies; are frequently out for several weeks at a time in the wilds and deserts, at the distance of several hundred versts from their homes. In the fisheries they are all employed in the several methods practised in other countries.

The carrier's trade is a great source of profit to the inhabitants of towns and villages contiguous to the high-roads. Many commodities are transported from one end of the empire to another by land; for instance, the Chinese goods from Kiachta to St. Petersburg; European wines, English beer, porter, and Staffordshire ware, from St. Petersburg or Archangel, to Irkutsk, &c. peltry from Okhotsk, among others.

The

The towns at the distance of from 500 to 1000 versts asunder serve as stations for changing the drivers and carriers, for example from Kiachta, Irkutsk, Krasnoyarsk, Tomsk, Tara, Ekatarinenburg, &c.

From the provinces of Archangel, which have little agriculture and few products, consequently but little money, the men emigrate every spring to the Volga, to get employment in the transport-vessels and the fisheries, or to earn money in towns or villages, as carpenters, bricklayers, plaisterers, servants, labourers; with which they return in autumn, though sometimes not till after two or three years absence. Were it not for this practice, all the money must be drained out of such provinces by the taxes, &c. Those who work on the water, and in general all the common mechanics, are called burlaks.

The mixture of town and country professions has been already noticed in general terms. In the different villages all over the empire we see the mechanical businesses of towns carried on ; but more especially in the parts adjacent to the Volga, and in the vicinity of the governments of Mosco, Nishney-Novgorod, and Kazan. It is scarcely possible to come to a village where there is not a smith, a taylor, a shoemaker, a tanner, a soap-boiler, a builder, a joiner, a house-

painter, &c. and many of the boors follow these professions as their main business. In numbers of villages almost all the boors are either boat and ship-builders, wire-drawers, braziers, cotton-printers, comb-makers, coopers, dyers, turners, &c. On the Vetluga, a river to the left of the Volga, all the boors of several entire villages are turners and japanners; in some parts of the government of Archangel, numbers are employed in iron-smelting, and every where, among the inferior officers of the church, are found painters, limners, &c. All these and the like arts and professions are free to all; they descend from father to son; none has need to serve an apprenticeship to any calling, or to give proofs of his ability and skill, nor is liable to be punished for bad work, unless a downright fraud is discoverable. Thus the want of workmen is easily supplied, and all their work is kept at a reasonable price. But then, on the other hand, besides that husbandry is thus deprived of great numbers of hands, all security of having good work for your money is lost; the man that is really master of his business will hardly get an equitable price for his work, and probably also much good materials will be spoiled. In many villages, particularly such as belong to noblemen, are manufactories, on a larger or a smaller scale,
of

of lacquered wares, silk, hardware, &c. which are under the inspection of the college of manufactures. Pavlova, for instance, a parish belonging to count Sheremetof, situated on the Oka, contains 2300 taxable boors, who are almost all smiths, and altogether compose a manufactory, though every one works for himself. They make padlocks, shears, knives, sabres, wind-guns, musket-locks, files, plane-irons, and other tools, tongs, pincers, &c. The quantity they make, the goodness of the work, and the cheap rate at which they are sold, are truly worthy of admiration. Their goods go as far as Persia.

The employments of the female sex, both in town and country, vary but little from those in the neighbouring countries. They see to the cleanliness of the house, spin, weave linen and coarse cloth on frames, in quality but little inferior to what is brought from Germany; they bleach, full, and colour, knot the ends of the threads for a span long, for table-cloths, neck-cloths, &c. make felt, bake bread every day, &c. In general they are kept closer to work, and fare harder than is customary among their european neighbours.

The country market-towns and hamlets are commonly open; are mostly built in irregular

streets, with little kitchen-gardens and large yards to the houses. They are situated on the banks of the rivers, as the digging of wells is not in practice: as in most parts pebbles are not to be had in any considerable quantity, the roads and streets are frequently made of timbers, or bauks laid close together having the upper-part made flat with the hatchet. They contain many, not large, but good-looking churches, mostly of brick and plaister. The monasteries in and near the towns, from their strong walls, massy gates, and numerous church-towers, have the appearance of castles. The fortresses * dispersed about the country, have seldom earth-ramparts, mostly batteries of bauks laid one on the other, in the same manner as they build their houses; and about these a low palisade †. The canons stand on the gates, and upon the angles of the ramparts or batteries on wooden carriages. Their design is to keep the tributary tribes in awe, and the neighbouring nomades from the borders. Ostrogs, or houses surrounded with a palisade of upright pointed bauks, are either in towns, where they serve as prisons for criminals, or stand solitary in various parts of the country, for the same purpose as the fortresses.

* Kreposti.

† Nadolbi.

Villages * of very various dimensions, and parishes † are situated on the margin of rivers, brooks, lakes, and sometimes on mere morasses and springs. The parishes, or church-villages, are sometimes very extensive; and contain, it may be, 500 or even 1000 and more farms, from 3 to 7 churches, many of brick, markets, and trafficking places. Large villages are frequently called slobodes; but many slobodes are less than church-villages: the houses are ranged in straight streets, and the streets mostly laid with timbers.

The proper russian architecture is alike in towns and villages. A messuage consists of a dwelling-house, a few little store-rooms, stables, and a stew, or hot-bath, by which the yard is inclosed. All these structures are built of bauks, unhewn, placed on one another, and notched into each other at the four corners; sometimes, though but rarely, on a brick foundation; these houses are covered with boards, and when the owner can afford it, with oak shingles. The meanest dwelling-houses consist solely of one little room, which therefore has the door to the street. In it is an oven, taking up almost one fourth part of the whole space; adjoining to it,

* Derevni.

† Selo.

of equal height with the oven, is a broad shelf of board *. The top of the oven and this shelf are the sleeping places of the family. The light is admitted into these houses through two or three holes in the walls furnished with shutters †, or through a little window of muscovy-glass ‡, or only of bladder, oiled linen or paper. The smoke finds its way out as well as it can through these apertures in the wall. These rooms, as may well be supposed, are as black as a chimney; and, as all the household functions are performed in them, such as baking, cooking, washing, &c. it is hardly possible to keep them clean. They are called, with the utmost propriety of speech, black-rooms §. Under the floor of the room is a cellar ||.

A complete town or country-house, for the sake of having a cellar, stands raised a fathom above the ground, and has a black-room and a white-room ∂, and between the two, a small passage θ. The black-room has frequently a chimney to the oven, and a window of glass or marienglas; but the white-room has the oven of tiles, or bricks covered with plaster. The

* Potak. † Okoshka. ‡ Sluda; mica membranacea. § Tshornaia isba. || Pogreb. ∂ Gornitzà.
θ Seni.

entrance, by a covered flight of wooden steps to the aforementioned passage, is from the back-yard, not from the street.

The magazines or store-rooms* are small detached huts, for provisions, corn, in short all the necessary stores. The stables are mere hovels or sheds, open to the yard, or at most fronted with wattles, paid with mortar; in the latter case they are called pokleti. The bath-room† resembles a detached black-room. It stands alone; has an oven like the other, smoke-holes, a water-tub, brushes, and benches raised one above another in the form of a scaffold. The corn-kilns‡ are without the towns and villages. Places thus built must be very liable to raging fires; and, when once they break out, they rarely leave any thing unconsumed.

The household-furniture, both in town and country, even among people of opulence, is very simple. In the room, which, with very few exceptions, is, at the same time, the kitchen, are a table, benches, the shelf, which serves for the dormitory§, and in the corner one or more holy figures||. The rich have a great many of them, some with rims of beaten silver. Before these, lamps or wax-candles are kept constantly burning, or at least on all the festivals,

* Ambar.

† Ban.

‡ Ovini.

§ Potak.

|| Obrassi.

which amounts to nearly the same thing; so that many of these summer-rooms have the appearance of little chapels. Culinary utensils, and those for the use of the table, are as few as can well be conceived. As vehicles they make use of quite small open one-horse carts *, or somewhat larger, and half covered over like a child's cradle †, also with one horse, without shafts, so that a collateral horse can at any time be put to; both kinds of such a simple mechanism, that almost any boor can make a new one or at least repair the defects of the old one even upon the road. They are extremely light and commodious. — Splinters, like laths, of fir or very dry birch-wood ‡ are much more commonly used for giving light in the room, after dark, than tallow-candles.

As the country towns, in general, progressively endeavour to imitate the Residence, one perceives from time to time loftier houses of wood or brick spring up, built in a superior style, with fashionable furniture within, gardens laid out in a regular method, &c.

The inferior houses are much pestered with domestic vermin; besides the common house-rat § and mouse ||; they swarm with water-rats ¶, bats θ, large beetles ξ very frequent, crickets,

* Telegi. † Cabitki. ‡ Lutchinki. § Kriffa.
 || Mishe. ¶ Kriffa vodenaiā. θ Letutsia mishe.
 ξ Tarocani; blatta oriental. Linn. ☆

bugs *, fleas † in abundance ; various kinds of very troublesome flies, gnats ‡, moths, bull-moths, wood-lice ; in southern low places frogs, toads, and tadpoles ; in Siberia little beetles § ; about the Tsheremtshan, lapland beetles ||.

The preparation of their victuals is so simple, that foreigners do not easily bring themselves to relish it, but adhere to the customary way of dressing their food in their own countries. Fresh meats with watery sauce, or baked pasties ¶ of common crust, with minced-meat, or whole fish, fish with water and salt, without other sauce, cabbage and roots chopped together, cabbage-soup ¤, which is never omitted, meagre fish and flesh soups, cool-drinks θ, quas, with eggs, minced-meat, and leeks, pancakes ξ, soup of ground hemp and linseed, millet-soup and grits, turned milk π with meal and sour milk, &c. almost all seasoned with onions, leeks, garlic, and sometimes pimento, are their ordinary dishes. Where Tartars dwell, they use likewise a few wild roots, especially dog-tooth ρ, lily-roots φ, and others. For the evening repast are

* Klopi. † Bloki. ‡ *Dermestes lardarius* Linn.
 § Prussak ; *blatta asiatica*. || *Blatta lapponica* Linn.
 ¶ Piroggi. , Tsch. θ *Badvina*. ξ *Blini*
 π Kissel. ρ *Kandik* ; *erythron. dens canis* Linnæi.
 φ *Sarana* ; *lilium martagon* Linn.

served up nuts, orchard-fruits, and the several wild fruits produced by the country round; blackberries, strawberries, sloes, &c. At an entertainment of their friends and acquaintance they provide a surprising variety of these kinds of dishes. The lower sort feed very poorly at all times, but particularly in the fasts. In large towns, the table in good houses is becoming more luxurious and fashionable from day to day.

The most common domestic drink is quass, a liquor prepared from pollard, meal, and bread, or from meal and malt, by an acid fermentation. It is cooling and well-tasted. Corn-spirits *, and rectified corn-spirits †, supply the place of wine. In good houses, fruit-wines, raspberry-wine ‡, cherry-wine §, bilberry-wine ||, &c. from the juices of those fruits, mead and brandy made by fermentation, which are pleasant enough to the palate. Brown beer and metheglin are more in use than braga or white cloudy beer brewed from malted millet or wheat, with hops, and busa or white unhopped wheat-beer. Tea is in very general use. The true russian tea δ is a concoction of honey, water, and spanish pepper, and drank warm. It tastes well and cheers the stomach. Many even of the common people

* Vina.

† Vodka.

‡ Malinofka.

§ Vshnofka.

|| Tshernofka.

δ Sbitin.

drink

drink chinese tea, sweetened with honey or sugar. Persons of distinction keep their tables supplied with meats and drinks entirely in the foreign taste, hire french cooks, &c. as in other countries. Tobacco is but little used.

In the article of dress they adhere as faithfully, in the country towns and villages, to the manners of their fathers, as they do in food and lodging. The noblesse, all the officers in the civil department; and, besides the light troops, the soldiery all over the empire, the merchants of the chief towns and those who trade with them, the mine-owners, and almost all the people of quality throughout the empire, dress after the german fashion; and the ladies, even in the remotest and most retired parts of the country, appear more modishly attired than would easily be imagined. The burghers and mercantile class, however, generally speaking, stick close to the national dress, no less than the peasantry. Of this I shall speak a little more particularly.

The men let their beards grow, which are commonly long and bushy: the hair is cut and combed: their shirt * is short, without any sort of collar, and made of white, blue, or red linen. Their trousers † are loose, and tied below the knees. The shirt usually hangs over the trou-

* Rubashka.

† Stanni.

fers, and is girt round the waist with a string. Stockings * are not so commonly worn by the lower class of people, as leg-wrappers †, which they tie about their feet and legs with pack-thread, so as to make them look very thick. Shoes ‡ are worn by the better sort, and mat-slippers § by the common people; but half-boots ¶ are in very general use. Over the shirt they wear a short breast-cloth †, or a vest furnished with buttons. The coat θ is made so big as to allow of one side lapping over the other before, with little buttons, close sleeves, and a collar. The skirt is made with gathers at the hips, and reaches below the calves of the legs, and the garment is girt round with a sash that passes twice round the body. At the sash ξ commonly hangs a long-bladed knife, in a sheath. The covering for the head is either a flat fur-cap, with a narrow brim; or, in other places, a cap which forms a bag of a span in depth, in which they keep their handkerchief on their head. In summer they go with flapped high-crowned dutch hats, ornamented with a narrow ribband of some gaudy colour. The materials of the dress vary according to the rank and circumstances of the wearer; the rich wear fine broad cloth, some-

* Tshulki. † Onutshi. ‡ Bashmaki. § Lapki.
 ¶ Sapagi. † Fufcika. θ Sipoun. ξ Kushak.

times decorating the edges with gold cording, and little silver buttons for fastenings; common people clothe themselves in homespun cloth, and the summer in linen, made likewise at home. A well-dressed Russian makes a very good figure. In winter the common people wear sheep-skins, with the woolly side turned inwards; the better sort put on furs of a higher price.

The habits of the clergy, as well in their every-day wear, as when officiating at the altar, are in the oriental style; the latter of different colours, often in brocade, mostly very rich. The monks are always clad in black, and are also distinguishable by their high pasteboard caps, wound about with crape.

The women wear stockings or leg-wrappers, and shoes like the men, sometimes likewise picked-pointed slippers. The lower class frequently go barefoot, or simply in slippers on their naked feet: their shifts are white; but in Dauria the female peasants put on silk-coloured shifts of gauze or cotton: they fasten about the neck with a collar, and are decorated with fancied ornaments of needle-work: the vest* is close about the neck without sleeves, and sits tight to the body down to the hips; from the hips it spreads without gathers and reaches down to the

* Saraphan.

shoes; on the facing it is garnished with a thick row of little buttons from the top to the very bottom; it is however girt with a sash, to which the bunch of keys is suspended. The quality of the faraphan is various according to circumstances: of glazed linen, kaitaka, silks, frequently edged with fur, or lined with it throughout. The dress of the lower sort of females in winter is more complete, consisting of coarse cloth, or sheep skin, with sleeves. Another dress is the usual woman's gown, and a contushé without sleeves*. The *Dushagrek* is also worn on the faraphan, without a gown. In the winter they wear furs made after the manner used in Poland, with pointed sleeves. As this is usually a present made by the bridegroom, and the best piece of dress, the common people, in order to make a show of it, go, the whole summer through, to church, to make visits, &c. in the pelice. They also wear necklaces of corals, pearls, or golden chains, ear-rings of precious stones, and decorate their fingers and wrists with rings and bracelets.

The head-dress is somewhat different in different districts. The girls in general wear their hair uncovered more than the women; the former plait it in three plaits, with ribbands

* *Dushagrek*.

and beads tied to the points of them. In Tver, Novgorod, &c. they wear a band across the forehead, bedizened with pearls and beads of various colours, which gives the appearance of a tiara or open coronet. At Voronetz and the parts adjacent, both women and girls wear coifs made to fit the head, with cheek-pieces and tresses. About the Oka, at Murom, and the country round, the caps are in the form of an upright crescent. In the governments of Mosco, Yaroslaf, Kaluga, and the circumjacent parts, the coif has a stiff flap before, like a jockey-cap, which is decorated with tresses, pearls, and various-coloured stones. On this they hang in the tartarian fashion, a veil; but which they usually keep thrown back. The veil is generally of silk, set off with gold or silver lace. In their ordinary dress, they tie on the veil over the hair, without any cap. In western Russia caps are in use that are a kind of fillet, with tresses, pearls, and stones. Numbers wear caps having a stiff rim one or two inches broad, like a small skreen or a flapped hat. Persons of consequence, in towns, wind pieces of silk about their heads in such manner to let the hair hang down in ringlets from under it; and these head-dresses have very much the resemblance of a high turban.

ban. A complete woman's attire is very dear, but remarkably handsome.

Paint * is as necessary an article in the dress of a russian lady, as linen. The freshest and ruddiest young woman of the place puts on both white and red; and, as this practice is prejudicial to natural beauty, therefore such antiquated dames as would not appear hideous are forced to continue it. Fine white paint is made of pulverized marcasite; more commonly white-lead †. The rouge in the shops seems to be compounded of florentine-lake and talc, with powder of marcasite; red tiffany is also very much worn. The village-toasts gather the roots of *onosma echioides* Linn. or of *lithospermum arvense*, which, after being dried, they moisten with their tongue, and then rub their cheeks with it; or they extract the colour with boiling water and alum from the rind of these roots. Some rub their cheeks with river-sponge ‡, till the skin is sufficiently thinned or inflamed for being transparent to the blood. From the toilet, however, we will now retire with awe, and presume no farther to pry into its mysteries.

The Russians are a race much hardened by climate, education, and habits of life, having

* Rumiana. † Belila. ‡ Badiaga; *spongia fluviatilis*:
their

their own peculiar usages, which have a greater affinity with the asiatic than the european, only without the effeminacy. They sleep on the floor, the hard benches, or the boards placed shelf-wise for that purpose; in the summer contentedly lying down in the open air, in the field, or the yard of the house, as they do in the winter on the top of the oven, without beds, or merely on a piece of felt, sometimes with and often without any pillow, either under a thin covering or in their clothes. After performing their evening devotions, accompanied with frequent prostrations and crossings, before the sacred figures of the saints, they betake themselves early to rest, and rise again betimes in the morning, wash themselves, renew their pious orisons, and proceed with alacrity to business. Into the houses of the great and opulent, even at a distance from chief towns, feather-beds and late hours, with other luxuries, have long since found their way.

Whenever acquaintance meet together, their term of greeting is, *Zdravstvui* *! or sometimes, *Zdarovui* †! accompanied with shaking of hands, taking off the cap, bowing, and often with kissing

* Which may be rendered, All hail! or God save thee! or Good betide thee! — *Salve! Sit saluti!*

† Health! — *Sospes! Sanus!*

which is much in practice with both sexes. Even the lowest of the people greet one another with great civility. Inferiors kiss their superiors on the breast, and of people still more elevated above them they kiss the border of the garment; and, when the difference is very great, they fall down and strike their forehead upon the shoe of the great man. When they have any thing to request, they assume a tone and gesture, as if they were imploring mercy. It is indecorous to speak loud in the presence of superiors; and if any one happen to do so, he is presently chid by the by-standers, with * Do not bawl! When a man designs to honour his guests, he lets his wife and daughters appear, full-dressed, who kiss the guests, and hand them what they want at the entertainment. They seem to vie with one another in the profusions of hospitality. Old age is universally honoured. On the breaking up of company, they depart, saying, Proshai †! never omitting the valedictory kiss. On the slightest interruption or alteration to the ordinary course of whatever they are about, at eating, drinking, sneezing, at a sudden start, at the sight of a particular place, of a church, &c. they make the sign of the cross

* Nekritshi.

† Farewell.

with the fingers, on the forehead, the stomach, and the two shoulders, bowing several times, and adding, with a deep-fetched sigh: The Lord have mercy * !

They have usually two meals in the day ; in the forenoon about nine o'clock, and in the afternoon at three. The family at these times eat all together ; and, when it is numerous, first the males and afterwards those of the other sex. They allow themselves but a short time at table, and are easy and cheerful. Even among the inferior people the table-linen, platters, and vessels are kept in great cleanliness. If strangers sit down with them there are very copious potations. Intoxication is not disgraceful, and even among people of good condition, if a lady be overtaken in liquor, it is no subject of reproach. They are never quarrelsome or scurrilous in their cups, but friendly, jovial, courteous, speak in praise of the absent, and boast of their friendship ; and those that are not able to stand, find ready assistance from those that can. On journeys, merchants and others take their food with remarkably few formalities. In towns and great village-stations, women sit in the street, near public-houses, with tables having roast and boiled

* Gospodi pomilui !

meat, fish, pirogges, cabbage-soup, cucumbers, bread, and quas, consequently a superb and every where a cheap repast, which is taken standing, and always accompanied with a glass or two of brandy.

Holidays * are kept in idleness and wanton jollity. No one neglects to keep his birth and name's day, and those of his family. The day is opened by devout attendance on mass; then the person whose festival it is gives an entertainment of the best he can provide to his friends, who, to shew their attention to him, present themselves uninvited at his house. The poor make their masters and patrons a present of a loaf of bread, a few apples, or some trifle of that sort, in order to get a return in money to enable them to entertain their friends, which they faithfully employ to that purpose, and generally finish the day with a hearty drunken-bout.

To hot and cold bathing they are so habituated from their earliest infancy that the practice is indispensable. They usually go into the hot-bath once a week, besides other frequent occasions, such as, after a slight indisposition, hard work, on returning from a journey, and the like. They use the bath very hot, heating the room with large stones made glowing red, and

* Prasniki.

raising a vapour by repeatedly throwing water upon them; the room all the while being so tight that no particles of heat or vapour can transpire. The bather lies extended naked upon a mat thrown on one of the shelves of the scaffold already described, which the higher he ascends the greater the heat he feels. When he has thus lain perspiring for some time, the waiter of the bath, generally a female, comes and washes his body all over with hot water, scourges and rubs him with bunches of leafy birch, wipes him with cloths, and then leaves him to lie and sweat as long as he chooses. Numbers of them run from the hot bath into the cold water flowing by, and in winter roll themselves in the snow, without deriving any bad consequences from it.

Oaths and curses are but little in use: by God *! is their commonest asseveration. Obscene and ambiguous, abusive and ludicrous expressions are very usual among them. Flattering terms are in great use; for instance, to an elderly man, Batushka, good father; to an older man, Dedushka, good grand-papa; to a matronly woman, Matushka, good mother! which term is even used to the empress; to a girl, Dushinka! my little soul! to a boy, Golub-

* Ye Bog!

tschick ! my little dove ! &c. Good brother * is mostly used towards inferiors. Perhaps it may be better made in English, by Good friend ! or honest fellow !

The intercourse between the sexes is more free than elsewhere, particularly in the country, on account of the contracted space of their habitations and sleeping room, their baths, the simplicity of their conversation, and their artless songs. The behaviour of husbands toward their wives is, in general, comparatively with european manners, rough and austere. The wives must work hard, and are often obliged to be the tame spectators of their husband's intemperance and irregularities without daring to complain; but to this they are so early accustomed that they are seldom heard to vent a murmur even while smarting under very tyrannical treatment. In larger towns, however, and even among people of condition, the lady is in a quite contrary predicament; and they are either very much slandered or many a kind husband sometimes gets a rap of the slipper. It is a maxim with parents of the common class, never to become dependent on their children; and therefore keep the management of the house

* Bratetz.

in their own hands, till they die. Indeed the laws of the land are more favourable to widows and mothers than they are in other countries.

With substantial people the marriage-contract is made with mercantile punctuality ; the common sort enter into the nuptial state, for its peculiar purposes, as young as they can ; and, as housekeeping is not expensive, and as education is neither attended with cost nor trouble, they live as much at their ease as before. The betrothing is performed with ecclesiastical rites, generally eight days previous to the marriage, and is indissoluble. During this interval, the bride is only visited by the bridegroom, and the girls of her acquaintance, who amuse her with singing. On the last evening the young women bring the bride into the hot-bath, where they plait and tie up her hair, all the while singing ballads descriptive of her future happiness.

The marriage is solemnized in the church, before the altar, whither they proceed, with the figure of some saint carried before them. During the ceremony a crown is put on each of their heads. The priest, with due forms, changes their rings, reads to them an admonition of their reciprocal duties, gives them to drink of a cup in token of the present union of their fortunes, and dismisses them with his blessing.

At their return from church the father of the bride presents the young couple with a loaf of bread and some salt, accompanied with a wish that they may never know the want of either, for which they thank him on their knees. They then sit down to supper, and when the shift that the bride is to put on has been inspected, the new-married pair are put to bed. This shift is produced the next day to the guests, who, upon seeing the tokens of virginity upon it, felicitate the mother of the bride on that fortunate event. All things considered, it need not be mentioned that these tokens never fail to appear. This day passes with far more jollity than the former, as the young woman, being now freed from all restraint, can bear a part in the sports and entertainments of the company.

The national diversions of the Russians on holidays, at weddings, and other occasions of festivity, are very diversified; and have great resemblance with those customary among the Persians, the Arabians, and the Ægyptians. Their music is more usually vocal than instrumental. On the whole globe we shall scarcely meet with a country where there is more jovial and uniform singing than in Russia. They all sing from the child to the hoary head of age, and on all occasions, old women excepted, even
while

while at the most laborious and toilsome work, and generally with all their might; the country-roads re-echo with the songs of the drivers, the village-streets with the merry voices of the girls, and the drinking-houses are never without a concert. Their songs, are simple recitations, antient or modern; on the subject of love, nature, and tales of chivalry, giants, and heroes, frequently lewd, and their melodies uniform and monotonous, but sometimes pleasing enough. The little groups of girls sitting together ~~of~~ an evening and singing * are very entertaining. The men sing, from the fullness of their hearts, exploits of soldiers or kozaks in time of war, or a thousand other subjects that will suit their own style of composition and their own tunes and their thoughtless merry dispositions, reciting single words or lines from different songs, in every tune and for whole hours together.

The most complete vocal music is what we hear in their churches on sundays and holidays; which, as the church allows of no instrumental music in divine worship, is performed by singers expressly taught, mostly brought from the Ukraine for the principal churches, and gives great satisfaction even to people of taste. The substance is slavonian poetry; the notes † are ex-

* *Igrishi.*

† *Irmelodies.*

pressed by points, after the very old fashion, for four voices. The present choral music is mostly by Mottete.

The most common and the most peculiar instrument of the nation is the cow-horn. It is a cornet of from one to four feet in length, of wood or tree-bark, from which the stout lungs of a boor can produce a sound somewhat similar to the human voice. The balalaika, of the bandour kind, of very antient slavonian origin, is a common instrument both with the Russians and Tartars; according to Niebuhr it is also much used in Ægypt and Arabia. The body of it is an oblong semicircle, about a span in length, with a neck, or finger-board, of four spans. It is played on with the fingers like the bandour, or guitar; but has only two wires, one of which gives a monotonous bass, and by the other the piece is produced. Under the touch of able fingers, accompanied by a good voice, it sounds agreeably enough; and therefore it is not unfrequently seen in the hands of people of fashion. The gudak is a miserable violin with three strings, which are all touched by a short bow, though only one of them is fingered: it is not pleasing to every ear. The dutka consists of two parallel reed-pipes, each with three holes, differing in their notes up to an octave, so that it strikes the

hearer

hearer as if two were played on it. On this antiquated instrument only simple tunes can be produced. The *rilek* is a common village-lyre; and the *valinka* a diminutive pair of bagpipes. The *gusli* is a horizontal harp with wires, played on with the fingers, and is competent to any piece of music. As it is a pleasing instrument even without the accompaniment of the voice, it is much in request at the tables of country-noblemen, the overseers of the mines, and others. The cornet * is chiefly in use among the sailors and boatmen for aiding their voice in singing, as they rest upon their oars in falling down the current of the rivers, and in short when they have nothing better to do. It is rather a kind of shawm, of birch-bark, with six finger-holes, and a mouth-piece like that of a trumpet. The sailors make a jingling noise with two bunches of little bells, in time with their music.

Dancing † is a diversion every where followed. Even the common people, who here are not apt to become stiff with work, dance to admiration. They generally dance to the voice. The universal dance of the country consists in frequent genuflexions of the man, and a gentle step in proper cadence of the woman. It is pantomimic and very engaging.

* *Rashok.*† *Dantzav.*

The woman lays her arms on her breast cross-wife, beckons to the man with her fingers, shrugs her shoulders, and glides by him hanging down her head, with some side-glances, without giving of hands. In another dance, the man and woman shew a repugnance to each other ; they reciprocally pass by with averted and disdainful looks ; make faces of derision at one another as their backs are towards them ; turn about and shew by their looks and gestures an ambiguous aversion. The dove-dance * exhibits an imitation of the coaxing airs of turtle-doves or lovers. Generally one stands still to the other ; presently the man dances about with vehement motion, while the woman proceeds in gentle and delicate movements. Polish dances are also much in use, not only in the Ukraine, but in most other parts of the country, likewise during the winter evening-companies † are very common. They consist in absurd and ridiculous masquerades by young people. They sometimes, though but rarely, put on disguises, humorously represent grotesque and romantic stories, imitate particular persons and animals, and usually indulge themselves in coarse and licentious buffooneries. After these comedies, or masquerades, which are sometimes omitted, the party amuse themselves with sing-

* Gelubetz.

† Vetcherinki. Igristzi.

ing, dancing, playing for stakes, and always with eating and drinking.

They are very much attached to gymnastic diversions. In severe winter-nights the ladies make sledge-parties, in which there is always much vehement singing. The swing and roundabouts are diversions of the easter holidays. The former is carried to great perfection; five or six people stand or sit, one behind another on a plank, which is swung to a great height. Instead of a plank, some of these swings have wooden lions, swans, bears, coaches, chairs, sofas, &c. The girls divert themselves in summer in jumping on a board, resting in the middle on a block of wood as a fulcrum; one standing on each end of this board, they alternately bound one another up to a surprising height. The diversion of the ice-hills has been described in a former section of this work. Wrestling and boxing* are another diversion, though very awkwardly performed. Ringing the bells, on church and court holidays, is a species of exercise of which they are remarkably fond; but they produce nothing like harmony from them. The sole excellency consists in striking the clappers the oftenest.

* Kulashnoi boia.

In the country the women are generally delivered in the bath-room, and the births are for the most part happy and easy. The priest usually gives the child the name of the saint that stands on the day in the church-kalendar. Every one on visiting the lying-in woman kisses her, and privately slips a present in money under her pillow. Dependents make use of these opportunities for complimenting their superiors, who do not accept of presents.

A careless disposition, and a way of life naturally austere, an exemption from very toilsome labours, and the use of the bath, but especially a clear and bright atmosphere, peculiar to Russia and Siberia, keep them in constant health, generally to a good old age. Even the sick have seldom recourse to medicine. The country has but few, and no violent diseases peculiar to it. Sometimes in summer a sort of phthisicky complaint * appears, especially in the parts bordering on the Irtysh, affecting both men and cattle. It first shews itself by a bile on some part of the body; and though mortal without help, is not contagious. A certain cure has of late been discovered for it, by making an incision in the bile, quite into the sound flesh, and then dressing the wound with tobacco and sal ammo-

* Yassua.

nîac. In the confines of the upper Lena, swelled-necks are common; young persons, however, in places that have better water, escape them. About the Caspian they are subject to a horrid, slow-consuming, mortal leprosy, called the Krimmean-disease *, also the Black-sickness †; but this is not frequent.

Several of their domestic remedies, require a patient fortitude truly heroic. A mixture of garlic, onions, and spanish pepper, with brandy, is an universal medicine for all distempers. Venereal complaints, which are so very common, are here but little infectious, and not frequently even by coition are cured, without any preparation, by mercurial sublimate, verdegris, and vitriol, kneaded and baked in bread-crust; nevertheless great numbers retain injuries from it for the rest of their lives, and not a few fall early victims to death. Wolf's bané ‡ and sneeze-wort § are taken against almost all accidents, in large doses by eye-measure. Moxa || of mugwort-flocks, are often burnt on the belly for pains of the bowels, and on the joints, for aching bones.

The dead are sincerely and long lamented by their relations and friends; but, from a natural

* Krimskaiâ boleſna.

† Tſhornaia nemotſh.

‡ Aconitum lycoctonum Linn.

§ Veratrum.

|| Yadtin.

repugnance

repugnance to the idea of death, they use but little ceremony with the corpse. They put on it a shroud, then lay it in a coffin, in which it is brought, open, only covered with a pall, to the grave, attended by priests, chanting hymns, and bearing crosses and lighted tapers in their hands. Being come to the place of interment, the attendants take leave of the body by a kiss, give it a blessing, then fasten up the coffin, let it down into the grave, and shovel in the earth. * On these occasions the nobles and the rich put on black, but others make no change in their dress. The lower sort bury their dead in their ordinary clothes. Such as die on the barks upon the rivers are taken to the shore by their companions, and there put in the ground, without any other ceremony. Great funeral feasts and mourning in black clothes are not customary; among the few dishes they serve about, one is usually a frumenty of soaked wheat, in reference to the passage concerning a sprouting wheat-corn in John, xii. 24. In great towns the funeral obsequies are conducted, among people of condition, as they are in other countries.

At the new year is annually held a feast of the dead *, on which every body visits the grave of

* Raditeli sabol.

his relations, lays some victuals upon it, and hears mass, in payment for which the priests get the victuals. Profligates, such as have come to a miserable end, and all who have died without the sacrament, were formerly thrown, without inhumation, into a hut for that purpose *, and, on the Thursday before Whitsunday †, were buried by the clergy, who said masses for their souls, attended by the inhabitants of the place. At present greater indulgence is shewn to these poor wretches.

The antient orthodox Greek religion, to which the whole nation is attached, is universally acknowledged in doctrine and discipline. We shall here speak only of its externals. The churches and the sacerdotal vestments are very magnificent. The people at large are very strict in the observance of the outward forms of worship, attendance on mass, keeping the fasts, (which take up one-third part of the year,) performance of domestic devotions morning and evening, confession, receiving the sacrament, &c. To build churches is a meritorious act; hence it is, that even the smallest towns have such a number of these structures, and some of them handsome. As, by reason of the severity of the winters, it is necessary to heat the churches, there are frequently two churches in one church-yard, a

* Bogdoi dom.

† Sedinik.

winter and a summer church; at other times they consist of two stories, used to the same purposes. The clergy are held in great honour, and are extremely tolerant towards all other professions of faith. The titles of metropolitan and archbishop are not attached to the see, but are at present merely personal distinctions conferred by the sovereign, which give the possessors no additional power, and scarcely any precedence. Every one, on meeting a priest, kisses his hand, in return for which he receives his blessing with the sign of the cross: this custom is now, however, pretty much confined to country places. Passion-week is kept by every person in great apparent solemnity, with frequent ceremonies of devotion, to which they are invited by slow and dismal strokes of the church-bells: but the easter-week is passed pretty nearly as in some other countries, in various diversions, drunkenness, and debauchery. At this festival it is the universal custom all over the empire to present each other with an egg, accompanied with a kiss, at the same time saying: Christ is risen *! to which the other replies: He is risen indeed †!

In superstitious notions and practices the Russians are as little deficient as their neighbours.

* Christos vozkrest!

† Voiskinnoi vozkrest!

Many of them, as well as among us, believe in ghosts, apparitions, and hobgoblins, and are not fond of inhabiting the houses of near relations deceased ; whence it happens that many houses are left to fall in ruins, or pass into foreign hands at a very cheap rate. A house too, whose owner fell into poverty, or was otherwise unfortunate, will not readily find a purchaser, because it has ejected its master. On the Thursday before Whitsuntide the girls celebrate the festival of the flavonian goddess Lada and her son Dida, with singing, dancing, and decorating a birch-bush with garlands of ribbons ; which they afterwards throw with great solemnity into a river, and learn, from the figures the ribbons assume in the current, who they shall wed, and what their fates shall be in marriage. On the 5th of January they go by night into a cross-street or into a cellar, which is called, To go hearing *, and fancy they hear, in every sound, the prediction of their destiny. The day after Christmas is solemnized by the midwives, because the virgin Mary's midwife had a great hand in the redemption of the world. In Perme, and other places, they believe that some witches, by their incantations, have the power of de-

* Sluschnit.

prising the female sex of their right to become mothers *, but that others can preserve it inviolably to them ; therefore brides always apply to the latter. As wives are sometimes slighted by their husbands on that account, paramours find their advantage in this conceit. But to reckon up all the superstitious fancies of this nature would be both endless and unprofitable. Their domovois are our fairies, and their vodovois our water-goblins or wizzards of the stream. — But, to proceed with our historical sketch :

We have hitherto followed the principal clue of the russian empire, without concerning ourselves with the particular states into which Russia, during the period of its partition, was divided. None of these divisions left so many visible traces in the nation and in the political constitution, after its re-union, as the defalcation of the grand-duchy of Kief. Their origin from two stems, distinct though belonging to one nation, already separated the kievian from the novgorodian Slavi. Their destinies and their political condition have been since continually removing them farther asunder ; and when the state of Kief, after a separation of more than three centuries, dissolved again into the russian mass, its inhabitants were still a very different people from their primitive

* Sportshini.

brethren, in language, manners, and constitution. This difference subsists at present, notwithstanding the political incorporation; and the two nations are still designated by different names: the descendants of the novgorodian colony being now called Great-Russians, and the kievian Little-Russians. The former, in the proper acceptation, compose the principal nation *, and chiefly dwell in the old russian provinces, though they have spread through all the conquered countries. The home of the Little-Russians is the Ukraine, or the present governments of Kief, Tschernigof, Novgorod-Sivirsk, Kursk, Orel, Tambof, &c. and they are also called Kozaks, though in modern times these only form a particular class of the nation, and their constitution is now almost entirely effaced. — As, besides the Little-Russians, there are

* The Great-Russians may be regarded as the main-nation: 1. because the kievian state became, soon after its origin, subject to the novgorodian; 2. because the former, during the period of separation, was under a foreign sovereignty, whereas the great-russian state in part preserved its independency, and, under the supremacy of the Tartars, had an uninterrupted succession of native princes: 3. because Kief, on its re-union with the russian body-corporate, submitted to its sovereignty: 4. because the Great-Russians are by far the most numerous, and their dialect is the prevailing language.

other branches of the Kozaks, and these tribes, notwithstanding their manifest russian origin, being very distinct from the proper Russians by their mixture with other nations, and by their peculiar constitution, it is necessary to point out the essential particulars of their origin and circumstances.

By Kozaks, in its largest sense, is understood original separate russian stems, who settled in the southern regions of modern Russia and formed for themselves a military government. The name Kozak is probably tartarian, and signifies an armed warrior. It is likely that it may have passed from the Tartars to the russian Kozaks, when the latter, after the demolition of the tartarian sovereignty, settled in their seats and adopted a similar mode of life *.

The

* The emperor Constantine Porphyrogenneta, so early as the ninth century, mentions a country of *Kasachia*, between the Euxine and the Caspian, at the foot of the caucasian mountains; and, from the russian year-books, we learn, that the russian prince Mstislaf at Tmutarakan, a son of the great Vladimir, in the year 1021 made war upon a nation called *Kofagi*. Both seem to be the same people, and of tartarian origin. They got their name probably from their mode of life, as the Kirghis-Kaisaki bear the same appellation from their easy method of carrying on war. The russian annals frequently mention the tartarian

Kozaks,

The Kozaks, by reason of their federal constitution, military and civil, form a distinct part and class of the nation. This constitution they obtained after the demolition of the tartarian empire, when the government appointed them the guardians of the new frontiers, and allotted certain districts of the country for their support. They had their name from the tartarian Kozaks, which consisted of a band of refractory people. At present they are the irregular and country-troops, and are composed of various, distinct, considerable, bands or regiments.

Kozaks, especially under the reign of Ivan I. in whose time there were *Ordinskoi* (from the great Orda or Horde, the chief seat of the Tartars on the Volga) and *Azovskoi* Kozaks. These two branches are to be considered as the last remains of the tartarian sovereignty in Russia, and even these are either exterminated by the Russians, or have themselves dispersed, and united with other tartarian nations. — In their stead arose the *Don-kozaks*, who, notwithstanding this connection and the apparent analogy of their manner of life, political regimen, and features of face, are genuine Russians, as their language and religion evince. Had they been converted to the latter, the russian annalists, who carefully take notice of every conversion, would certainly not have passed it over in silence. *Sammlung russ. gesch.* vol. iv. Compare with *Hupel's nord. miscell.* part 24 and 25. *Annales de la Petite Russie, par Scherer.* *Georgi's description of all the nations of the russian empire.*

The internal constitution of the several Kozaks, though in complete subordination to the russian supremacy, whose subjects they are in the strictest sense of the word, is at once military and democratic ; with the Malo-russians the military establishment is more regular. The Kozaks have no nobility, consequently no vassals : all are brethren, and may reciprocally command and obey, without reproach or farther consequence. They elect their superiors from their own body, reduce them again to the common level, and choose others in their stead : the commander in chief alone is appointed by the government, whose concurrence is also necessary to his being deposed. All the commanders are in constant pay of the crown ; but the common Kozaks only when in service. They are obliged always to clothe themselves at their own expence, (the Siberian Kozaks excepted) to provide themselves with horses and arms ; consequently, at all times to be completely ready to march : while in actual service each common man receives the munition and the pay of a soldier, 12 rubles per annum ; the pay of the officers is in proportion. They enlist their young people into the service at the age of 18, and give them their discharge when turned of 50.

Their

Their commanders, as countrymen, are called in the villages elders, or aldermen *, and over towns and districts, attamans, corruptly hetmans. As militia, they have subaltern officers over tens and fifties †; captains over hundreds ‡; ensigns §; scribes ||; adjutants δ; and every regiment θ, which, according to the extent of the district, is from 1000 to 3000 men strong, has a general-officer ξ; but the whole division or class of the Kozaks is under the command of a generalissimo φ. All the officers, up to the attaman, are without rank, and may be under the subalterns of the army. In the two last turkish wars, however, all the officers of some regiments, and of others such as distinguished themselves by their bravery and conduct, obtained the rank of officers of the regular militia. Since that time they have several attamans, and others, who are staff-officers. The obedience of the common men towards their superiors, especially when they are at home, is very trifling, and regards more the circumstances of fortune, and the confidence they have in their commander, than the post he fills. The officers, however, may punish petty offences by pecuniary mulcts

* Starshini.

† Desiatniki and piatidesetniki.

‡ Sotniki.

§ Chorunshi.

|| Pissari.

δ Yessauli.

θ Polk.

ξ Voiskovoi attaman.

φ Glavnoi attaman.

to the regiment-box, by disgrace, or by the scourge.

Besides an exemption from the capitation-tax, the Kozaks enjoy several other privileges, according to circumstances, in their particular districts; such as, the liberty to fish, to hunt, to get their salt from the lakes, to distil brandy, &c. without paying for it. This maintains their families, when they are in the field; and, in long intervals of peace, enriches the industrious.

Every Kozak must keep two horses, when in service, and clothe himself in the polish or oriental fashion, but the quality and colour of his dress is left to his own choice; therefore, on mustering-days they make a motley appearance. Their weapons are: a lance, headed with iron, about a span long, with a shaft of three yards and a half in length, a sabre, a firelock, carabines, or pistols, or, only a bow and arrows. All bear lances, which, when on horseback, by means of a flip thong, they sling to a rest in the stirrup, on their arm, or on the pommel of the saddle. Of the other weapons some have one sort and others another. Some are without sabres, and others without fire-arms. Those that are provided with the latter, bear a cartouch-box over the shoulder, which is replaced by a quiver with such as carry the bow. The lance is generally decorated

decorated with a bit of a streamer just below the iron head. The whip *, being a plaited leather lash an ell long, and as thick as one's thumb, fastened to a short stick, may also be reckoned among their weapons, since, besides exercising it upon their horses, they fall upon an unarmed enemy with it, making very sensible impression. Their saddle is merely a wooden frame, under which they lay a piece of felt for saving the skin of the horse, and on it a leather cushion, in compassion to their own. The Kozaks are always expert riders, and their miserably-looking horses are well taught, and perform wonders. Each polk, or regiment, has two or more banners of silk, cut to a couple of points by a pyramidical fissure, on which is painted the figure of some patron-saint, with arms, &c. They have no drums or martial music.

On their expeditions they are very light; no artillery, no tents, no baggage, forage, and store-waggons. A piece of felt is their tent, their cloak, and their bed; the provision is carried by the second horse; and, wherever they find any thing that their horses can eat, they always make bold to take it for them. Against regular troops they are not eager to contend; but upon such as are less disciplined they rush

* Kantshu.

with great impetuosity ; in attacking the baggage and magazines, in forcing contributions, and the like, they perform miracles. In the late turkish wars some polks behaved so well, that, in reward for their services, they were clothed in uniform, and their officers received rank and portépées, and on some the empress bestowed military orders, and gold-medals to be worn as marks of her favour. According to their original destination, they are still chiefly employed in guarding the lines or frontiers, a part of them in forts and stanitzes, and another part during summer in the steppes, where they encamp in tents or in huts made of bushes or clay.

The Kozaks are divided, as well by their origin as by their present constitution, into two main branches ; the *Kozaks of Little-Russia*, and the *Kozaks of the Don*. From the former are derived the slobode-regiments in the government of Kharkof, and the Saporogians ; from the latter the volgaïski, the grebenski, the orenburgski, the uralski, the sibirski, and several other branches of Kozaks.

The grand-dukedom of Kief was, since Oleg transferred thither his seat from Novgorod, the capital of the russian nation ; and continued to be so till the year 1157, when the grand-duke Andrey Yuryevitch Bogolubskoi chose Vladimir
for

for his residence. From that time forward, though Kief had its own princes, yet this continued no longer than till the year 1240, when the Tartars conquered Kief and desolated the whole country. Eighty years the tartarian dominion lasted, during which this grand-dukedom retained its native princes, but they were under the arbitrary orders of the Tartars, and were obliged to divide their sovereign-rights with the tartarian viceroys. From this supremacy, which left the country still some semblance of an independent constitution, Kief fell in 1320, under the dominion of the lithuanian prince Gedimin, who defeated the last grand-duke Stanislas, placed a viceroy in his stead, and in his conduct towards this unhappy country, acted from no law but that of the conqueror.

At this æra we are probably to fix the origin of the MALO-RUSSIAN Kozaks, or Kozaks of Little-Russia. The dread of a foreign sovereignty which seemed to announce itself by unusual severity, may be reasonably supposed to have given rise to this military republic. A multitude of fugitives, who had abandoned their country, collected themselves together in the lower regions of the Dniepr, where they soon began to form a petty state. The perpetual incursions and contests to which they were subject from their
neighbours

neighbours the Poles, the Lithuanians and Tartars obliged them to adopt a military form of government. Their numbers were increasing considerably, when Kief, for the second time, in 1415, was ravaged by the Tartars; and, lastly, on this grand-dukedom being entirely with Lithuania incorporated into the polish state, and the kings of Poland, and the inhabitants suffering still greater hardships and oppressions than before, many of them again fled to the new colony which had now assumed the name of Little-Russia, in order to distinguish themselves from the great russian empire. By insensible degrees they now spread as far as the Bogue and the Dniestr, and possessed the whole country included by these rivers and the Dniepr. Villages and towns sprung up in which the Kozaks passed the winter with their families; all the effective men roaming about the steppes during the summer, and, like the knights of St. John, perpetually engaged in petty wars with the Turks and Tartars*. These circumstances rendered them a barrier to the kingdom of Poland against these enemies; the rise and progress of the new free-state was therefore not only not impeded on the

* So early as towards the latter end of the sixteenth century, the Kozaks subdued a part of the Crimea, captured Trebisond, and made military campaigns to Constantinople.

part of Poland, but even fostered and encouraged in various ways. King Sigismund made over in perpetuity to the Kozaks, in 1540, the countries lying above the cataracts of the Dniepr. Stephen Battori put them upon a regular military footing, gave them a hetman or supreme commander, and granted them likewise considerable districts *. His successors, however, departed from these prudent measures; they forbade the Kozaks to quarrel with the Turks, without considering that they thus destroyed the fundamental policy of this warlike state; Poles forced themselves into the country and took possession of the principal offices; the greek clergy, in short, were obliged to renounce the patriarch of Constantinople, and to acknowledge the spiritual supremacy of the pope.

* The sixth hetman, prince Bogdan Roschinsky, had a grant of the town of Terechtemirof, which from that time became the capital of the Kozaks, which had hitherto been Tscherkassy. The Kozaks obtained permission to inhabit the whole region from Kief to Terechtemirof, and on the eastern side of the Dniepr their former possessions were enlarged by a tract of country of 120 miles in extent. Thus Stephen had the prudence by this piece of policy in some measure to subject the Kozaks to him. His successors profited by this dependence, till at last the mutual relations of the two states, which had arisen from protection on one side and gratitude on the other, degenerated into oppression and rebellion.

These

These and numberless other oppressions at length brought on a tedious war, prosecuted with various success, and terminating on the part of the Kozaks with their throwing off the supremacy of Poland, and submitting themselves formally to the tzar of Russia. This submission took place in the year 1654, under the hetman Bogdan Chmelnitzki, and this example was soon followed by all the towns and inhabitants on the eastern side of the Dniepr, with Kief. Thus at length was Little-Russia and the antient main-feat of the slavo-russian nation, after a separation of 334 years, again united with the main body of the russian monarchy. The events of this country, from that period, fall in with the history of the russian empire. The name Little-Russia indeed still subsists; but the form of its government, its kozak establishment, and the nation itself have undergone great alterations, which have only some vestiges of its former difference.

The Malo-russians are somewhat different in their manners and way of life from the other nations, and are therefore considered as a particular people.

Their country possesses every advantage favourable to a numerous population; a mild climate, arable plains, partly indeed sandy, but mostly
fertile,

fertile, few mountains, waters abounding in fish, and a sufficiency of forests.

The Malo-russians, in the year 1240, fell under the yoke of the Tartars; from whom they were conquered by the Lithuanians in 1320, during their subjection to whom, they probably formed themselves into Kozaks; and in 1471, they were reduced under the dominion of the Poles. At that time they all dwelt beyond the cataracts of the Dniepr, and were therefore called Zaporogians, which appellation was afterwards limited to a distinct troop of them; in 1654 they submitted, after a tedious war with the Poles, to tzar Alexey Michailovitch, and from that period have ever continued under their antient masters.

Their intercourse with the Poles has given them somewhat of a polish and russian mixture in their features and look, a mingled set of manners and customs, and their speech a polish dialect. Indeed they are so blended that their original character is lost: dissembling, industrious, and active; friends to the pleasures of love, of the bottle, and vociferous mirth.

The nation is distributed into nobility, militia, burghers, and boors. The nobility are descended partly from renowned warriors; but mostly from the polish nobility and others that remained among them. They may possess estates and

vassals, pay no personal taxes, and can enter into the service.

The military class is the principal; and, so long ago as the reign of king Stephen of Poland, procured a division of the country, not into provinces, but according to regiments. These at present are Kief, Starodub, Tchernigof, Neshni, Priluki, Gadis, Poltava, Lubin, Pereiaslav, and Mirgorod; each having its capital town of the same name, and district-towns, with numerous villages for Kozaks and boors.

The regiments * have as many Kozaks as there are barracks in the confines of the government; accordingly there is a great inequality in the number of companies as well as of men. In regard to officers or commanders who furnish themselves with horses, clothes, arms, and accoutrements; their œconomy is the same with that of the Kozaks in general. By the appointment of king Stephen, they were all placed under one chief†, but, as some of them greatly abused their power, scarcely any thing of that dignity now remains except the title. The Kozaks hold their messuages entirely as freeholds, and follow whatever employments or trades they please.

The malo-russian military has its own jurisprudence, and its own war-chancery, in which

* Polki.

† Hetman.

the hetman presides, who, till the time of Mazepa, was nearly arbitrary in his decrees; yet one part of the troops is still called the hetman's guard. The insignia of the hetman are, the truncheon, the national standard, the horse-tail, kettle-drums, and the national signet. For defraying the public expenditures, the Kozaks raise money by taxes on corn, tolls at bridges, fairs, &c.

When the Malo-russians submitted to Russia, they consisted of 40,000 warriors, who soon increased to 60,000. At present they are incomparably more numerous, but great numbers of them are registered only as Reserve-Kozaks. In later times a part of the Kozaks, especially such as are properly ukrainian and slobodian are put on the footing of hussars, and changed into regular light-horse. They retain their messuages, are in constant service and pay, wear the hussar uniform and arms, and their officers have rank in the army. All these together compose a body of about 30,000 men, and consist of ten regiments, the servian, the moldavian, the macedonian, &c.

The malo-russian yeomanry in the regiment-towns, &c. are free, have magistrates and voievodes of their own choosing, and pursue all kinds of civil trades. They are under the chancery of the malo-russian general government.

The boors * live in villages adjacent to those of the Kozaks, and belong either to the crown or to the nobility. They are established according to the laws, and not at pleasure. They are exempt from military service, but pay the head-money. They exceed the number of the Kozaks and burghers in a three-fold degree.

The houses of the Kozaks, burghers, and boors, are more in the foreign style, of partition-work and mud-walls; where wood is scarce, almost entirely of mortar, with more apartments, always with chimnies, and plastered white on the outside. The furniture is likewise more in the foreign taste, and better finished. Many of the principal people and foreigners, both in their habitations and their manner of living, entirely resemble the Poles and Germans.

The towns carry on a trade with the products of the country, corn, cattle, flax, wool, tobacco, saltpetre, &c. and have all the necessary artificers. They trade to St. Petersburg, Riga, Breslau, Poland, the Krim, and other places, and carry brandy to the russian towns. As yet they have set up no manufactories.

Agriculture and the breeding of cattle are the chief businesses of the Malo-russians. They produce far more corn than they want for their own

* Pospoliti or Poddamie.

consumption,

consumption, which overplus they partly export, and partly distil into a prodigious quantity of brandy. About Kief and Poltava they have lately made a good beginning with the culture of the silk-worm and the vine. In some districts grazing succeeds much better than agriculture. The several species of cattle resemble those of Poland. The sheep are of the common sort, and bear good wool, but the management of them will still admit of great improvements. They attend more to the breed of neat-cattle than of horses, because they use the former for draught, and because they always grow fat in autumn, and may be sent in large droves for the slaughter-houses of Breslau, St. Petersburg, and other places. Many of the country-people and Kozaks have considerable cow-lares, and numerous stocks of bees, which they tend in the polish manner. Even children are employed in the sandy districts in gathering the polish cochineal *, or the cocons of an insect found on the roots of the *scleranthus perennis* Linn. of the *lichnis viscosa* †, of the strawberry and the cinq-foil.

The Malo-russians feed like the Russians, only as they have fine gardens, they eat more vegetables, and in general their diet is better. Where there is plenty of beer, mead, and brandy, they

* Thervetsh.

† Smilka.

feldom care about wine. In woodless places they warm their rooms and cook their victuals with dried weeds, straw, and cow-dung.

People of the towns dress themselves in the german, russian, and some in the polish manner. The Kozaks go entirely in the polish dress, only not with the shaven crown. They wear little caps with a flat broad brim ; the hussars are clad in their own uniform ; the peasantry wear the same clothes as the boors of Russia and Poland.

The women of condition are getting every day nearer to the french style of dressing.

The ceremonial of their baptisms and burials is that in use with the greek church.

At their marriages, it is usual for the mother of the bride, from an old traditionary superstition, to try to frighten the horses of the guests. On the morning after the wedding the tokens of preserved chastity are exhibited ; and that day is passed more jovially than the former. On such occasions it is neither unusual nor disgraceful for even ladies to take strong liquors far beyond the point of exhilaration ; indeed, in plain terms, to be completely drunk.

The Malo-russians have no peculiar maladies. The plague sometimes appears upon their frontiers ; but it neither spreads wide nor lasts long. They have cured the venereal disease from time
imme-

immemorial, by a solution of a drachm of mercurial sublimite in three pounds of brandy, of which they take a spoonful daily. Even inoculation of the small-pox has been long in practice among them. Without any preparation, they bind a rag dipped in the variolous pus upon some part of the child's body, without making an incision in the skin. The child seldom dies of this disease, and as seldom suffers any injury.

During the war between the Kozaks and the Poles numerous bodies of fugitive Kozaks fled from the western to the eastern side of the Dniepr into the southern provinces of the Russian empire, where, preserving their military constitution, they settled in an uninhabited but fertile region *. This is the origin of what are called the *flobode* Kozaks. The country in which these were established had antiently belonged to the grand-duchy of Kief, and, from the time of its being first over-run by the Tartars, had remained an unpeopled desert; the newcomers who now returned to the desolated inheritance of their fathers, were well-received by *tzar* Alexey Michailovitch; their numbers increased by the arrival of new settlers, and they constructed many towns and villages. This re-

* In the present government of Kharkof, and partly too in those of Kurk and Voronetch.

gion at present is one of the most inhabited of the russian empire.

The second considerable colony of the malorussian Kozaks, the Zaporogians, arose much earlier than the slobode regiments. In order the better to defend the country of the ukraine Kozaks against the inroads of the Tartars, it had been settled that a part of the young unmarried men should always abide on the southern borders where the Dniepr falls into the Euxine; by which means this district shortly became a rendezvous of stout martial youths, and the stay there was considered as a school for military exercises. The Polish government favoured this seminary, by which the country obtained the benefit of a border-militia; and the greater degree of freedom in which the young Kozaks here passed their time, was so agreeable to them, that they were never desirous of a discharge from their unquiet and dangerous posts. Accustomed to a bachelor's life they admitted no women among them; yet their numbers were gradually increasing by fugitive Kozaks who sought a shelter among them from polish oppression. By little and little their habitations extended to the shores of the Bogue, and they established themselves in all the adjacent parts. About the commencement of the seventeenth century

century they came to a total separation from the parental stock, the malo-russian Kozaks, under the hetman whereof they had hitherto lived, and erected a military state of their own, whose chief was to be an elective arbitrary koschevoiataman. Their chief-seat, which they called *setfcha*, consisted of a fortified camp, and though they often removed it from one place to another, yet they constantly remained about the cataracts, *porogi*, of the Dniepr, from which they received their distinctive appellation *: Zaporogi, "at the cataracts."

The constitution of this little military nation was one of the most curious in the world. War was the ultimate aim of their social connection, their habitual trade, and their darling employment. Agriculture and the breeding of cattle they entirely neglected, and followed the fishery, and the chase, no otherwise than as matters of pastime. Celibacy was enjoined as a fundamental law of their state; but for gratifying the

* *Kofch* in the tartarian signifies a camp. Ataman is of like import with hetman. The term *setfcha* comes from the rufs verb to cut off, to lop away (1); the camp was fortified, and consequently cut off from the circumjacent region or district. *Za* in rufs signifies behind, beyond, and *porog* a cataract or water-fall.

instincts of nature they made a practice of bringing off women from their neighbours, but the ravishers were obliged to keep the victims of their lust at a distance from the *fetscha*. In order to keep up their numbers, they not only stole children wherever they could catch them, but criminals and vagabonds from all the nations around were welcomed and adopted by them. There are but few european languages that were not spoken among them. — Their constitution was purely democratic; every Kozak enjoyed equal rights. Their ataman was elected annually; and, on the expiration of his office, fell again to the rank of the common Kozaks. Every citizen of the republic had equal pretensions to this sovereign dignity. — No written laws were known to them, but they had usages which held the place of law, and by which decisions were made with extraordinary strictness and impartiality. A Kozak who killed his fellow-citizen was buried alive with the body. A thief was obliged to stand three days on the pillory, and punished with lashes till frequently he died under the scourge. — The generality of them adhered to the greek church; yet no notice was taken of diversity of opinion in matters of faith. Their moral character was conformable to their way of life and form of government:

they had all the virtues and vices of a free people subsisting by war and rapine. They were courageous and savage; hospitable and greedy of prey; active and temperate on their expeditions, and lazy and gluttonous at home. — The number of effective men among them, amounted at times to 40,000 *.

These Kozaks often changed their sovereignty, if we may so call the relation in which this indomitable people stood one while with Poland, then with the Tartars and the Porte, and lastly with Russia. Peter the great destroyed their *fetscha*, on their taking part in the rebellion of the ukrainian hetman Mazeppa; but they assembled again afterwards under the protection of the khan of the Krimea, and were re-admitted in 1737 as russian vassals. A chancery was erected for the purpose of overseeing them, which however had but little or no influence on their internal government. The only obligation they were under to the empire was to appear in the field when commanded, at which times they were paid and provided as was customary with

* The russian chancery was seldom exactly informed of the real number of the Kozaks, as they considered their force as a political secret. In the year 1764, the number of effective people was thought to amount to 27,117; but probably they were much stronger.

the Kozaks. In the turkish war which terminated in 1774, they not only proved faithless on several occasions, but also betrayed their design of rendering themselves independent. When they re-captured the region of the Dniepr, which at that time was called New Servia, but afterwards belonged to the New-russian government, and was peopled with colonists, they declared that country to be their property, practised hostilities against the settlers, and partly by artifice and partly by violence reduced about 50,000 Malo-russians to their obedience. This rebellion, their life of celibacy and rapine, the total neglect of agriculture in so fertile a country, and the constant resistance they made to every attempt at bringing them to a better conduct, at length determined the empress, in the year 1775, entirely to annihilate the existence of this little spartan state. A body of russian troops surrounded and disarmed them. A manifesto was issued, by which it was left to their choice, whether, by adopting a decent and moral regimen, they would become useful subjects, or take themselves out of the empire. A part of them remained, and took to various trades; others in numerous bands withdrew to the Turks and Tartars, or led a roving life about the russian frontiers. The country which they had possessed was added to the then New-russian government,

vernment, and belongs at present to that of Ekatarinoflaf.

Thus far their history is known and even related by foreign writers. Not so notorious, however, is the remarkable fact, that the zaporogian Kozaks still subsist, only under another name, and have recently received a new constitution in a country allotted to them. By an ukase of the 30th of June 1792, Catharine II. assigned to the Zaporogians, who rendered themselves serviceable during the last turkish war, the island of Taman (belonging to the province of Taurida) with the entire region between the river Kuban and the sea of Azof as far as the rivers Yeya and Laba (a tract of 1017 sq. geogr. miles) for their place of settlement. They obtained at the same time, under the name of Kozaks of the Euxine, a well-regulated kozak-constitution, and the right of electing their own atamans; but are immediately dependent on the governor of the province of Taurida, and are placed under the department of the college of war. Their numbers, of both sexes, amount now to above 20,000, among whom is a disciplined corps well-equipped of 15,000 men.

We see then that though their little democracy was perfectly in the manner of the Kozaks,

vet

yet it was far more inflexible and severe, and in its political œconomy entirely spartan. Like them they were divided into companies, and had officers of the same distinctions. To live in military celibacy was their primary law. But, as, in this manner, they must soon die out and be extinct; they fell on the expedient of adopting all the fugitives from every nation, without paying the least regard either to language or religion, or adverting at all to their manners or any former criminality of conduct. Accordingly, they were a vile rude mixture of Malo-russians, Poles, Tartars, and every other alien race, which not only did not decline, but went on increasing. All the officers were in the pay of the crown. The source of maintenance to the common people, in the method of the Kozaks, ought to have been husbandry; but they make depredations and plunder, on the territory of the Tartars, Turks, and Poles, their principal business, not only in time of war, but at all times.

Their setfcha had a wooden fortification, and a particular fortrefs, containing the artillery, arms, ammunition, and warlike stores. The setfcha had some resemblance with a kozak polk, or regiment, divided into 38 quarters * answering to

* Kures.

companies. In the *setfcha* were but few timber houses, as the generality of these Kozaks dwelt in huts of earth with thatch-coverings. Each *kure* had its officers, and an attaman*, but all of them under the command of the *koshevoi* attaman, who, for the time his office lasted, enjoyed great authority, as also considerable revenues from tolls on carriage of goods, imposts on merchandize, brandy, &c. but, when out of office, he returned to the common level, and was paid no greater respect than the rest, as they regarded all that were out of the service as brethren. This officer was elected annually, and might till then have been only a common Kozak, so he had but distinguished himself by prudence and courage; and, whatever he had been before his election, to that he became again on the expiration of his office. To be a Kozak, was, in their opinion, a great honour; and therefore they used to adopt as Kozaks, foreigners even of the highest ranks, who happened to be travelling through their country, giving them a diploma to produce as occasion might require, to certify to the world that they had been found worthy of that superior distinction. As all among them enjoyed equal rights and liberties, every dissatisfied person,

* *Kurevoi attaman.*

without any formal dismissal, was free to go wherever he pleased : though the greater part of the Kozaks dwelt in the setscha, yet many of them lived in a suburb adjoining to it, and not a few on their little cow-yards *, and the petty villages of their territory.

In the setscha was a market-place, wherein there constantly stood a pair of kettle-drums, which were beat by the master-drummer †, whenever the people were to be called to council. At this market were sold provisions, materials for clothes, with all kinds of necessaries, brought thither by foreign merchants, who took up their quarters in the suburbs. The chancery was so negligently conducted, that it seldom knew the true number of the people. This was very unequal, but was generally supposed to exceed 40,000 men. In the year 1764, they had 27,117 Kozaks in actual service.

Public assemblies ‡ were held in the market-place. The koshevoi attaman appeared with the ensigns of his office, the baton of command §, the banner, and the secretary of state with an ink-pot. Round the commander stood the people. The koshevoi styled the people his young brisk brethren ; and the people in return saluted their officers in terms of respect. How-

* Chutori. † Dobysh. ‡ Rada. § Politza.

ever, after all these mutual compliments, they frequently proceeded to injurious epithets, and thence to blows; for many of them, who wanted to carry some particular motion, or had an interest in preventing the success of another, came to the assembly drunk. Whoever was the subject of debate, was obliged to keep at a distance, as he otherwise ran the risk of being killed on the spot. In the rada they consulted on pretexts for going on parties of pillage and rapine, and the best means of conducting them. As the cavalry stood the brunt of all, they retained the booty. At the election of the koschevoi and the starshines, almost the whole rada used to be drunk. The koschevoi likewise, during his office was obliged to be very bountiful in brandy, as a means of procuring obedience. The Malorussians followed the laws of Poland; the Zaporogians had nothing written, but judged according to antient usage, and decided by the plurality of voices. I shall just throw together a few particulars concerning them, in addition to those already given.

Each Kozak procured himself a horse, arms, clothes, ammunition, and provision, for ravaging parties. While in service they were provided and arrayed by the crown like other Kozaks.

It was their general practice to make attacks, in which there was little hazard and much to be got.

Though the Kozaks of the setsch lived by property, according to the primitive import of the term, as vagabonds, on spoil, &c. yet many of them in little villages without the setscha pursued somewhat of agriculture and graziery in the malorussian method. In times of peace they all received a little pay from the public chest. The fishery on the Dniepr was likewise a great help to them; which they divided, according to the number of the kures, into 38 portions. Many in the suburbs addicted themselves to traffic and the vulgar trades, in proportion as bounds were set to their ravages and depredations.

In their clothes they resembled the Poles, or rather the polish Ulans; every one wearing such materials and colour as he chose. Their dress was handsome and warlike.

In the setscha they lived, according to our notions, very uncomfortably and miserably. Each kure was a separate mess, and a couple of Kozaks were cooks. Their every-day's food consisted in porridge of meal or grits, and quas or fish-soup with meal, which they ate out of long troughs with spoons. They very rarely tasted flesh, and still seldomer bread; but they
guzzled

guzzled brandy as long as their money held out ; when that was gone, they were obliged to be sober for several weeks. Marriage formed no part of their political economy ; no woman was even allowed to come into the *setfcha*. Such as had the good luck to carry off women from the Tartars and Poles, or to get loose females from Little-Russia, cohabited with them as married people, or even without the forms of espousals in their home-stalls. The sons were raw unpolished Kozaks like the fathers. Neither marriage nor the attendance on domestic affairs were allowed to detain them from fulfilling the decrees of the *setfcha*.

Whoever was a Kozak, was bound to profess the faith of the orthodox Greeks. When they had been successful in robbery, they first shewed their gratitude to heaven by making rich presents to the church and its ministers ; and then bought themselves handsome sabres and clothes, and entertained in the drink-houses all that came ; by which liberality they were soon reduced to poverty again. When general Balmain surrounded and destroyed their *setfcha* in 1774, he found this barbarous and unruly gang of banditti in possession of 46 pieces of cannon, and a large quantity of small arms and ammunition. The

generality of these reduced Kozaks are become peaceable and industrious husbandmen.

I shall close this account of these Kozaks with some general remarks by Mr. Plestscheyief. The ground occupied by the Kozaks, says he, is exceedingly rich and fruitful, very proper for agriculture, for the cultivation of vines, for gardening, and for pasture: but the Kozaks, whose supineness is unpardonable, being totally given up to laziness, make not the least advantage of their fine situation, and neglect every benefit which would enable them to be happy themselves as well as useful to their neighbours. They carry on a tolerable commerce with the Greeks and the inhabitants of the Kuban, which consists in fish, horses, horned cattle, and other products. They make some wine, but in so small a quantity that the whole of it is consumed at home. About the Don, as well as in almost every part of Russia, from time to time are found gypsies, a race well known every where by their frauds and larcenies. They have no fixed residence, but wander continually from one place to another, and exercise the trades of blacksmiths, farriers, and horse-dealers, which last profession they generally carry on by exchanging instead of selling their horses. In order to collect the poll-tax

tax with greater certainty, the majority of them are put under the inspection of different masters, of whom they are obliged to obtain passports before they can go upon their perambulations. To the number of the Kozaks may be added the inhabitants newly planted in the neighbourhood of the Euxine. These last are under the direction of the great hetman of the Kozaks of Ekatarinoflav and that sea, whose numbers are not yet precisely ascertained.

The second main branch of the Kozaks are the Donfkoi. They have this appellation from the region of the river Don, which they have constantly inhabited, and most probably derive their descent from novgorodian Russians. The first settlements of them on the Don cannot well have been earlier than after the Tartars were forced out of those parts. The same homestead and a similar mode of life probably occasioned the tartarian name of Kozaks to be given to the rising colony, which was afterwards communicated to the confederate Malo-russians, who lived under a like military constitution. It is not improbable that the Russians, on their first coming, found still considerable remains of Tartars in these parts, with whom they united and induced them to adopt the greek religion and the russian language. This supposition at least accounts for

the rapid increase of the republic and the russo-tartarian mixture, which is still perceived, as well in the features as in the language of the donskoi Kozaks.

This colony, soon after its origin became a considerable state. The happy effects of their profitable warfare tempted a multitude of bold and enterprising youths to come over to them from all the provinces of the empire; and the vassalage of the boors, introduced about this time into Russia, contributed greatly to multiply their numbers by runaways from this depressed condition. A great many escaped back to their former homestead, and even the prisoners of war obtained denizenship by the policy of the Kozaks, for the sake of increasing the number of their soldiery.

After the unfortunate campaign of the Turks against Astrakhan in 1570, they felt themselves sufficiently bold and powerful to make Tscherkask their capital, 60 versts from the fort of Azof belonging to the Turks. — They were now in reality a bulwark to the russian empire; the monarch of it therefore acted by these Kozaks, as the kings of Poland about the same time did by the Malo-russians; she favoured their growth, assigned them countries free of imposts, on the borders, and endeavoured to keep them in a
fort

fort of dependence which might be useful to the government, especially in times of war. In the year 1579, we for the first time meet with donskoi Kozaks among the russian troops; a body of them consisting of 3000 men were in the expedition made by tzar Ivan Vassillievitch against Livonia, by whom they were also paid. Since that time they have frequently been of great service to the russian empire by their bravery; though, from their love of independence and from their propensity to depredation, they have suffered themselves to be incited to rebellion*.

At present the donskoi Kozaks inhabit the plains about the Don, between the governments of Saratof, Caucasus, Voronetsh, and Ekatarinoflav, as far as the sea of Azof. Their territory, which even now amounts to upwards of 3600 square miles, was formerly far more extensive; but since the rebellion of 1708, a part of it has been added to the adjacent provinces. As the donskoi Kozaks have preserved their kozak constitution entire, they live under a military regimen totally different from the other governments. Their number is estimated at 200,000, of whom

* The most important rebellions of this nation, are, that of the year 1670, of which Stenka Rasin was at the head, and that of 1708, under the conduct of Bulavin.

a corps of light-cavalry of 25,000 is always ready for marching.

Internal revolutions, and a disposition to broils, have given birth to many emigrations of the donskoi Kozaks, whereby several new branches of Kozaks have arisen, of which only the most signal are deserving of being farther particularised. — The earliest emigrations happened to the Volga, where the Kozaks used only to tarry in summer, and on the approach of winter to return to their dwellings about the Don. In process of time, a part of them completely settled about the first mentioned river, whereby several towns on the Volga, as Saratof, Dmitreffsk, Tzaritzin, Tschernoi Yar, and others, obtained inhabitants, who afterwards for the most part went over to the civil constitution. In the year 1734, the *volgaic* Kozaks were declared independent on those of the Don; when they obtained equal privileges with the latter, and had their own ataman. At present the kozak regimen is abolished among the greater part of them; no more than two colonies are upon the true kozak establishment and perform military service. These are the DUBOFSKOI and the ASTRAKHANSKOI. The former have their chief seat in the little town of Dubofca, on the right bank of the Volga. The country assigned them lies between Dmitreffsk and Tzaritzin,

Tzaritzin, and extends over a space of 100 versts in length and 60 in breadth. They amount to about 3000 heads. In the year 1776, they were obliged to deliver a part of their men, who were formed into a proper kozak-regiment, and had its quarters between Mosdok and Azof. — The astrakhan Kozaks dwell partly in the city of Astrakhan, and partly in the villages around; in numbers they are about equal to the former.

The donskoi Kozaks are mostly well-set, handsome men. The generality of them have a countenance completely russian, but in many is seen a mixture of the tartarian; probably from their female ancestors of that race. Their moral character is entirely russian; but their education and course of life render them more bold and resolute than the russian vulgar. Totally negligent of all science and letters, by which a generous occupation is afforded to the mind in the calm retreats of study, they have at all times had people, who have rendered themselves famous as heroes and conquerors, and sometimes as rebels or tyrants. The patriarchs of the uralian Kozaks; Yermak, the conqueror of Siberia, Stenko Rasin, Bulovin, Yemelka Pugatshof, were donskoi Kozaks.

The constitution of the Kozaks of the Don is that before mentioned as common to them all;

yet since the late wars with the Turks, their polki, or regiments, are put on a more regular footing, are uniformly clothed and accoutred, and their officers have rank in the army. In 1778, four of their atamans were made colonels, and more than 20 of them majors. From the registers of the year 1764, they raised, clothed, armed, and mounted 16,000 men at their own costs; at present, in proportion to their numbers, they can at any time furnish 50,000 cavalry completely equipped. In regard to the crown, besides the many privileges that have been granted them, they are entirely exempt from the payment of taxes; for the levies their internal constitution requires, they impose small contributions on themselves.

As far as Tcherkask, they all live in stanitzas or badly fortified villages, of which they have somewhat more than a hundred. Every stanitza contains a company unequally numerous; has its officers, the atamans, its sotnik, yeffaul, and writer, its court-house, a standard, and a few pieces of cannon. Some stanitzas have two churches. — When a meeting is to be held at the court-room, the yeffaul cries aloud in the streets: Ye sons of atamans! come to council! — Without the stanitza is an inclosed place *

* Taboun.

for

for mustering the horses. Tcherkask, their only town, they boastingly call, our donskoi-kozak town. It is spacious, populous, and divided into eleven stanitzas or quarters. Here is the chancery of the whole tribe, in which the commander, or chief ataman, presides, and the officers of the regiments or polki are the council. From the low situation of the town on the right shore of the Don, one part of it is much exposed to inundations. As the donskoi are more employed in service than the other corps of Kozaks, they are consequently better soldiers. War is their element, because they then can live according to their own inclinations, and benefit themselves by the spoils of their enemies.

Their houses in the stanitzas are like the russian; but having mostly chimnies, they are therefore more cleanly. Since the prussian war, they have been observed to have better furniture, and to live more comfortably; many of their rooms are handsomely fitted up with paper-hangings, and the holy figures are better painted. Tcherkask contains some brick-houses. They are a hospitable people; great lovers of strong liquors, which they enjoy in frequent potations.

When at home, their principal support arises from the breeding of cattle, agriculture, and the fishery.

fishery. The chase is but of little consequence in their open steppes. Many of them have farms *, and on them from 50 to 200 horses, horned cattle to the same amount, and a still greater number of sheep: the grazing business, from their mild and short winters, succeeds very well; and, on the banks of their rivers, they have plentiful crops of hay, rich lands for all kinds of corn, and thick forests. In general, from their propensity to war, and a disposition to idleness, they are very negligent of husbandry; and then, from the want of towns in which they might turn their superfluity of money, they have no encouragement to pursue it but what arises from necessity; so that they are mostly poor. The same negligence is apparent in their orchards and gardens, which, with but moderate industry, might be made very productive. With arts, mechanics, and the various branches of study, they never meddle at all. At Tcherkask, it is true, the ordinary mechanical trades are carried on; but then it is by foreign workmen; and, as to the common Kozaks, they make themselves what they want for their own uses, and are contented with it, as it is, without aiming at making it better. What fish, caviar, izinglase, and hides remain over

* Chutori.

from their own consumption, they barter with russian, tartarian, turkish, and persian merchants for iron, articles of clothes, and small wares.

The women, from the frequently long absences of their husbands, are more accustomed to work in the field than the Russians; but they also resemble the men more in their manner of life and in regard to drinking; it is said of them too, that they easily supply themselves with other comforts while their husbands are away.

Their manners and customs differ very little from those of the Russians. In their espousals they observe no tedious ceremonies. The bride is fetched by the bridegroom and his friends on horseback; and the horse of the bridegroom is hung about with a great number of little jingling bells.

Their martial exercises consist in riding, tilting, and hacking with the sabre, and are a sort of solemn games. On these occasions they appear well mounted, in their best clothes, and exert all their dexterity. When the ammunitions arrive that are sent annually by the crown, they and the escort are met by all the stanitzas in parade, and received at the district of Tcherkassk by the polk of the place, with its colours flying, and brought to the arsenal in grand procession.

A second

A second colony of the donskoi Kozaks are the GREBENSKOI who separated from their parent-stock about the same time with the VOLGAIC, and settled about the river Terek, whence they are also called TEREKSKOI Kozaks. In a campaign of the tzar Ivan I. against the caucasian Tartars, a body of them, as the van of the army, penetrated into a part of this great chain of mountains, which on account of its prominent rocks was compared to a *comb* *; and on this occasion it was that they received their appellation, which they generally bear to this day. Their present homestead is on the Terek, where their regiment, consisting of 1200 men, does duty in the frontier lines against the highland Tartars of Caucasus. Their description is nearly that of the last-mentioned race; on whom they were even dependent in some respects till 1708, but at present not at all.

They dwell in five fortified stanitzas, making so many companies. Besides their own commanders and war-officers †, they are under the orders of the commandants in the Kiskar and Mofdok. Being principally used against the Tartars of Mount Caucasus, they are almost always under arms, and therefore in constant pay. Being

* In-russ, *greben*.

† Voiskovoi ataman.

thus inured to service, courageous, and well-acquainted with the mountains and the tartarian manner of fighting, they are of excellent service against these untractable and piratical neighbours; but their number not being sufficient, in the year 1776, six stanitzas, or fortified villages, between Mosdok and Azof, were added to them, and supplied with Kozaks from the Volga. These form one distinct polk, or corps, under the denomination of the troop of Astrakhan-Kozaks. — Near the grebenskoi Kozaks dwell the SEMEINSKOI, who are of the same origin with them, and therefore need no particular account.

The host of the donskoi Kozaks having considerably increased in numbers, the horde of the Volga by insensible degrees sprung out of it; who at first only passed their summers on the Volga, but the winter in their stanitzas on the Don, and at last remained stationary on the Volga, whereby all the towns bordering on that river, from Samara, as Saratof, Dmitreffk, Tzaritzin, and Tchernoyar, became inhabited; and their inhabitants, in process of time, from the condition of kozaks, attained to the state of burghers; and at present are under the usual municipal magistracy, as merchants, burghers, or boors. A considerable number of them, however,

however, still adhered to their primitive constitution as kozaks, independent of those on the Don.

The present Volga-Kozaks consist of two polks, the duboffkoi and the astrakhankoi, the former of which is elder than the latter, and is vulgarly called the Volga-militia *.

The duboffkoi polk has its chief residence and chancery in the slightly fortified town Dubofka, on the shore of the Volga, near the mouth of the river. Dubofka, 53 versts above Tzaritzin; a part of them, however, dwell in great villages, on the shore of the Volga, above and below Dubofka. This polk has its war-commander, and other officers, artillery, arms, ammunition, all furnishing their own horses, their own cloaths at pleasure, &c. like those of the Don, and is registered at somewhat above 1000 men fit for service, though they might raise to the number of 3000. This corps is dependent on the commandant of Tzaritzin; and, as the greater part of them are in continual service, so they are all constantly in pay. Their lands are but little fit for agriculture, those on the banks of the Volga consisting of wet meads liable to inundations, and farther from the river of arid

* Volkoe-volko.

hilly steppes. They are well adapted to the breed of cattle, which accordingly they follow as far as their military service will allow, and their wives can manage it. Many of them have farms with a good number of cattle; but the greater part are far from being rich. In 1776, a large company of them was draughted off, and stationed in six stanitzas between Mosdok and Azof, where they form a polk apart.

The astrakhan Kozaks dwell partly in Astrakhan, and partly in villages between Astrakhan and Tzaritzin, on the right shore of the Volga. Until the year 1750 they had only 300 men in service; at present they are equal in numbers with the duboffkoi: but they have far less people of reserve, as almost all the men are in arms. Their whole establishment resembles the duboffkoi, consequently like a donskoi polk. In like manner they are in constant pay, as also in perpetual service, and dependent on the commandant at Astrakhan. One main part of their service is to furnish the relays at the several stations, and the necessary escorts for travellers and baggage; the former according to the post regulation for pay; the latter as service on the highways from Astrakhan to Tzaritzin and part of the road to Kisliar; by which they sometimes gain and sometimes lose.

Their villages * are newly built, in a regular method. For want of timber, the houses are made of slight frame-work, with clay-walls. The villages are surrounded with earth-ramparts, and furnished with a few pieces of cannon to protect them against the Kalmuks, Kubanians, and Kirghisians. The Kozaks placed at stations between very distant stanitzas, and are relieved at stated periods, live in pits dug in the earth, built over with bush-huts and wicker work.

As the Kalmuks wander about the steppe as far as the Volga, and in the vicinity of the stanitzas, with their herds; and the steppe itself being far more saline than higher up the Volga, these people, even though they had time for it, have but little opportunity for agriculture, and even the management of cattle is attended with numerous and great impediments; they therefore keep only horses for service, with a few cows and sheep for household purposes: they profit more from the fishery, which they are at full liberty to make the most of. To conclude, they live as soldiers and carriers, who, in dress and manners, differ not at all from the Don-Kozaks, their patriarchal stock.

More lately than the volgaic, the ORENBURG-Kozaks separated from their common stem. At

* Stanitzas.

their first rise they dwelt collectively about the river Samara; but, after the construction of the orenburg-line in 1730 to 1740, the major part of them were transported thither. At present they have their homestead along the Samara; along the Ui and the Ural, from Verkural'sk to Ilezk, also in the petty forts erected against the Kirghises and the Bashkirs. In all these forts, Orenburg excepted, they compose the majority of the inhabitants, and can easily bring 20,000 men into the field; though only from 8000 to 10,000 are inrolled for military service.

Their army establishment only differs from that introduced among the Don Kozaks in this, that they compose so many troops as they possess forts, not polk-wise belonging to one body, but are all under the war-ataman at Orenburg. Their employments in garrison, are to form little encampments between the distant forts, to patrol the frontiers, to provide for the convoys or escorts and relays, to go on expeditions in the kirghisian steppe, whenever their presence is necessary for repelling their attacks, or for enforcing restitution for the robberies and depredations committed by the hordes; in all which the Bashkirs are very helpful to the Kozaks. Their remote situation does not allow of their being sent to distant scenes of war; therefore

F F 2

their

their division into polks or regiments is not necessary.

The rest of the military establishment of the orenburg-Kozaks in regard to their commanders, arms, pay, &c. is perfectly similar to that of the Kozaks of the Volga and the Don. Their dwellings and dress are the same. The females clothe themselves like the country-women of the provinces where they live.

Their means of support, besides their pay, are different in different districts. Those on the orenburg-line, for want of good arable land, mostly follow the breeding of cattle and many carry on trade. In the Bashkirey, the provinces of Ufa and Iset, they cultivate the ground with industry and profit, as they can get a good price for the superfluity of their produce on the lines. Those in proper Bashkirey have an opportunity for hunting, which they pursue to great advantage. On account of the fertility of their districts, the opportunities they have of earning somewhat, and as their service does not remove them far nor for any long time from their habitations, they are in general wealthier and live better than the Kozaks of the Don.

One of the most numerous and powerful branches of the donskoi stem is formed by the URALSKOI, formerly called the YAIKSKOI Kozaks.

According

According to their traditions they first arose about the beginning of the fifteenth century by an inconsiderable number who drew towards the Caspian as free-booters, and afterwards established themselves at the mouth of the river Ural, formerly called the Yaïk. Augmented by tartarian stragglers and prisoners of war, the colony soon spread farther up the shores of this river; and, at the time of their voluntary submission to czar Michaila Feodorovitch, they were already a considerable nation, which has since much increased by emigrations from the Don. At the commencement of the last century they obtained from the russian government a regular constitution, with permission to settle in their present possessions. They were placed on the footing of the Kozaks of the Don, obtained the free and exceedingly-productive fishery of the Ural, the licence to fetch their salt, duty-free, from the adjacent saline-lakes, the liberty to distil brandy, together with several other privileges. Presuming upon their opulence, in the year 1772 they rose up against a reform, proposed by the government, of the irregular troops; they were, however, soon reduced to obedience. The year following a part of them joined the crew of the famous rebel Yemelyan Pugatchef. On the restoration of tranquillity

the government restored to them their possessions and privileges; but in order to efface the memorial of this rebellion, the name of these Kozaks, that of their capital, and of the river where they dwelt were abolished, and changed for those they bear at present.

Since that time their political constitution has got a somewhat different form, to prevent the like misfortunes in future. Their number is computed to be about 30,000 men fit to bear arms, and they keep up a corps properly equipped of 12,000 men, among whom, however, are many Tartars and baptized Kalmuks. Their proper homestead is along the right shore of the Ural, from the mouth of the Ilek to the Caspian; where, besides their grand capital Ural'sk, they possess the important town of Grief on the Caspian, and perform service in the line of forts on the Ural against the Kirghises. On the left or kirghisian side of the Ural they have only the small fort Iletzka on the Ilek, which is inhabited by an independent colony detached from the main body. Their territory, which extends in length 80 geographical miles, yet forms no particular division in the political geography of the empire, (like the homesteads of the Kozaks of the Don and the Euxine,) but belongs to the government of Caucasus.

Their

Their constitution, in the main, resembles that of the other Kozaks. Their officers serve without any farther pay than what they all receive from the crown, and which amounts yearly, for the whole host, to 5000 rubles ; but they have several privileges in the fishery annexed to their rank. The people generally make choice of persons of good condition, though sometimes of quite common Kozaks, who stand in some degree of credit with the rest. The common men, when they remain at home, receive ammunition every year from the crown, and when they march, the ordinary pay. They carry the arms generally used by the Kozaks ; but their weapons, horses, and riding-gear are particularly good.

Before the commotions in 1774, when any thing was to be published or performed, the people were assembled round the town-house, whence the commanders came forth with their insignia ; and, the yessaul having previously commanded silence, opened their proposals. To which the people, with great vociferation, replied : We are content ! or, We are not content with it ! or both at once. At present no steps can be taken and nothing resolved on without the approbation of the commandants ; and consequently no more consultations are held,

The chief town Ural'sk stands on the high right-hand shore of the river Ural, in 51 degrees 10 min. north lat. comprehending, within an inclosure of a slight earth-wall, about 3000 houses built of the white poplar and other kinds of wood. In 1771 there were 4000 Kozaks enrolled for service; but all the inhabitants together amounted to about 15,000, and the lesser towns collectively might make up nearly the same number. Those that serve are distributed into companies of a hundred to each.

As to their livelihood, they are a fisher-folk, but certainly one of the wealthiest and most warlike of any in the world. The breeding and management of cattle has, in their mild climate, and their dry steppes, every possible advantage. Accordingly they keep great numbers of cattle; and many a common Kozak has on his farm *, which lie dispersed along the streams and rivers to the distance of 100 versts from Ural'sk, a stock of from 200 to 300 horses, not fewer horned cattle, and a greater number of sheep. Their horses and kine are of the russian species; but the sheep mostly a mixture of the broad-tailed kirghizian, the short-tailed russian, and the common european, which run all toge-

* Chutori.

ther, and thereby degenerate to the ordinary european species. One difficulty attending the management of cattle here, is, that, on account of the depredations of the Kirghiftzi, and the thieveries of the Kalmuks, they must be guarded by shepherds armed and on horseback. For agriculture they have but little opportunity; but fruit succeeds so well in these parts, that the orchards on the banks of the rivers look like little forests. Water-melons, or arboufes, if they be watered at proper times, thrive surprisingly in the dry steppes, and especially under the culture of the Kieselbashes. They fetch their corn across the steppes, a distance of from 500 to 800 versts from Samara, Syfran, &c. on the Volga, and therefore eat dear bread. Of trade, professions, and the several kinds of mechanical employments, they are so little fond, that pedlars and workmen, passing to and fro on their journies through this country, even shoemakers and taylor, are sure at all times to find a flourishing business with them. Some Kozaks have bee-stages in the woods by the side of the rivers, several to the amount of 50 hives. The chase yields antelopes * in abundance, and wolves, foxes, swine, &c. more sparingly. Hunt-

* Saiga.

ing, with the Kozaks, is more a pastime than a business.

The river Ural is rich to an extraordinary degree in those fish which ascend it from the Caspian; especially the various kinds of sturgeon. The Kozaks make three fishing-seasons in the year. In January they fish with hooks *. This is principally confined to the belluga †, which in some parts of the river lie in heaps as if piled on one another, and gulp the hook the moment it presents itself before them, by which they are drawn without any farther trouble on the ice; and, together with sterlet, the common sturgeon is taken in great quantities. In the spring season they fish with nets, in which they principally catch sevruga, a particular small sort of sturgeon ‡, and in autumn also with nets, when all sorts of fish are taken. Every fishing season is opened by the firing of cannons; on which the Kozaks assemble, hear the fishing-laws read, and then run overjoyed to the places where they intend to fish. Only such Kozaks as actually serve are allowed to fish, and these cannot employ any assistant. The officers may send two, three, or four men, according to their rank. Even to the fishery the Kozaks go armed, on account of the

* Bagri.

† *Acipenser huso* Linn.

‡ *Acipenser stellatus* Pall.

frequent attacks of the Kirghisians. At the fishing seasons of autumn and winter, dealers come from almost all parts of Russia, and buy fish, caviar, and isinglass, for specie. In winter they transport the fish hard-frozen; in autumn and spring they are salted, and as it were buried in lake-salt. The caviar is prepared immediately after the fish are brought ashore, by separating the filmy substances from it. The less salt the better the caviar, but so much the more liable to grow rancid and corrupt. The fish-trade is so considerable, that the whole army, in this sequestered and unfruitful region, can not only live upon its profits in specie, but even grow rich and opulent by it.

Besides these seasons, in October and December they fish particularly for supplying the tables at the imperial court. The fish caught in these months are sent by deputations, composed of persons of merit, to St. Petersburg or Mosko. The first deputation brings from 60 to 100, the second upwards of 250 sturgeons; for which the first deputation receives a present of 800 rubles, and the latter a present of 1000 rubles. The Kozak-chancery takes the money, repays the travelling and carriage charges, and presents the deputies with sabres mounted in silver; the best of which, for the foreman, costs 40 or 50 rubles,

rubles, each of those for the starshins, 15 or 20, and those for the common men 9 rubles each. All the sabres have inscriptions on them.

The women, as they neither spin nor weave, but pay for what they wear, live lazily and well, but are regular and cleanly in their domestic affairs, and take care to keep a good table, excellent beer, mead, and brandy.

Excepting that their clothes are of better materials, the Kozaks of the Ural dress in all respects like those of the Don, and are only distinguishable by the peculiar form of their cap.

The people pass their time in one continued scene of wanton, idle gaiety, not without licentiousness. From morning till night they are gadding about, babbling, singing, and carousing. At their marriages the young folks mutually present each other with their wedding-clothes. Before the bride a flag is borne to church, which she follows covered with a veil. The festivities on the occasion consist in dancing, singing, and drinking, and running about the street, the houses being so small they can only contain a few invited guests to sit at table. The husbands treat their wives with far more gentleness and indulgence than is customary among the Russians; therefore they are free, gay, shrewd, and handsome.

Their

Their irregular manner of living seldom admits of their reaching to a very advanced age; but they enjoy a good state of health as long as they live, so that they have no regular physicians among them. Surgeons, however, are sent to them from time to time to set them to rights when the venereal infection rages in their districts.

Excepting the Kozaks in Iletzkaia, who form a corps entirely separate, all that inhabit the collateral towns are in some respects dependent on the main-chancery, and are altogether supported from the chief town. To these are added the indigent and infirm people; and, as they are very much cramped in regard to the benefits of the fishery by the principal corps, they are idle and spiritless, but otherwise in dress and manners they are completely in the taste of the genuine Uralians. Each place has its ataman, its other officers, and its peculiar chancery.

The last, and in its origin the most remarkable branch of the great donskoi family, that we shall here mention, are the SIBERIAN-Kozaks. Instigated by a disposition to roaming and to pillage, considerable multitudes of donskoi-Kozaks, in the sixteenth century abandoned their homestead on the Don, in order to rob and plunder the countries lying eastward. In their predatory expeditions

ditions they were not only dangerous to the newly-acquired russian possessions on the Volga, but they even ventured to embark on the Caspian, where as enterprising pirates they soon became formidable to all the bordering nations. At the time that desolating swarms of robbers were spreading terror on every side, Ivan II. sat upon the russian throne. The efforts of this prince to restore order and security to the provinces he had conquered from the Tartars, and to give vigour to the commerce with the neighbouring asiatic nations, had scarcely struck root, when the flagitious spirit of depredation on the part of the Kozaks threatened to frustrate his fairest hopes. He, therefore, in the year 1577, assembled a considerable army and got together a fleet of ships to chastise these audacious hordes, and to restrain them for ever within the bounds of duty. Panic-struck at these mighty preparations, the robbers dispersed and fled into the neighbouring regions. A company of between 6 and 7000, proceeded, under the conduct of their ataman Yermak Timofeiyeſ, along the rivers Kama and Tſchuſſovaiya, onwards to Permia, and ascended the Ural mountains. Here Yermak saw before him the immense tract of country which we now call Siberia; unknown wilderesses and ferocious tribes, never seen by the rest of mankind, seemed
necessarily

necessarily to set bounds to his farther progress; but animated by courage, and delighted with the bold idea of being here the founder of a new and extensive empire, Yermak, with his handful of armed companions, marched down the side of the Ural chain, defeated the tartar khan Kutschum, pressed forwards to the Tobol and to the Irtysh, and to the Oby, and subjugated on this astonishing expedition, Tartars, Vogouls, and Ostiaks. Fortune had done much for Yermak, and Yermak had done every thing he could for being worthy of his success, but she denied him the enjoyment of his heroic enterprise. His little army, wasted by battles and fatigues, was not sufficient to maintain a tract of so many thousand square miles, and to keep in obedience such a number of conquered nations. In the impossibility of completing his conquest by the establishment of a state, he resolved at least to rescue from oblivion the memorial of his achievement, by raising for posterity an indelible monument of the boldness of his genius. He accordingly in 1581 made over his conquests by a formal capitulation to tzar Ivan; who, in return for this important service rendered to the country, absolved him from all responsibility for his former undertakings to the detriment of it, and nobly rewarded his magnanimity and his talents.

If ever a grand project was brought to effect by small and insignificant means, it was certainly in this conquest of Siberia; and if the man who was capable of conceiving it, and with such means of accomplishing his purpose, merits the appellation of a great man, then posterity cannot refuse that name to the conqueror of Siberia. — Yermak had not the good fortune to see his plan of conquest ripen to perfection. He died in 1584; but after his death the discovery and conquests were prosecuted, by regiments of donskoi-Kozaks sent thither for that purpose, as far as the eastern ocean and the mountains of China; and in the middle of the last century this whole part of the world was already a russian province. — As well those who were implicated in Yermak's rebellion, as the Kozaks who had more lately come to Siberia remained in that country as a militia to keep the reduced nations in obedience. Most of them married with the natives of all nations; many of those who came afterwards brought their families with them. This was the origin of the siberian-Kozaks, whose number at present far exceeds 100,000; but of whom the greater part carry on trades as burghers, and only about 14,000 do military duty as proper Kozaks.

We pass on now to the remaining branches of the flavonian stock, which either wholly or in
I I part

part are inhabitants of the russian empire; confining ourselves to the most striking results in the account we shall give of them, as the greater part have their own histories, which only in certain respects have any connection with our present plan.

2. Of the three flavonian nations, properly so called, that are inhabitants of the russian empire, next to the principal nation, the POLES are the most numerous. According to the russian year-books, (for domestic accounts are here entirely wanting,) this people, at the same time with the russian Slavi, and on the same occasion, came from the Danube to the Vistula. Their state, now nearly extinct, was probably founded in the ninth century; though they first appear in history only at the close of the tenth. Notwithstanding they sprung from one stock with the Russians, the two nations were almost continually involved in hostilities, now threatening the one, and now the other with destruction, and which finally terminated in depriving the Poles of their existence as an independent nation. For rendering the mutual relations of the two countries more perspicuous, it will be necessary to distinguish two periods: the preponderance of the polish state over the ruined russian empire; and

the triumph of the latter, with its increasing power, over the declining polish republic.

The former period dates its origin from the unfortunate battle on the Kolka, in which the combined power of the russian princes was defeated by the Tartars, and in its consequences brought Russia under the dominion of these furious conquerors. During the whole period of the tartarian oppression, and even for a long time after, the Poles and Lithuanians, less harassed by the mongole-tartarian hordes, maintained a decided superiority over the russian state, enfeebled by its partition and the abuses of a foreign sovereignty, and managed it so profitably that they seized on a great part of the finest provinces of that empire. The several principalities of Smolensk, Polotsk, Tur, Vitepsk, Lutzk, Briænsk, and Pereyaslavl, and the whole grand-dukedom of Kief, with various other tracts of country, the enumeration whereof would be tedious, fell, in these times of devastation, by force of arms, to Lithuania; and on the union of that state with the kingdom of Poland, became part of the polish empire. After their emancipation from the tartarian yoke, it occurred to the russian princes to prosecute their claims to the captured provinces; but the fortune of war is too changeable

able always to favour the righteous cause, and the greatest and finest part of the lost territories remained with impunity in the hands of the usurpers, who dared to abet by their arms the resistance of several of the russian provinces against the sovereignty of the empire. The domestic disturbances which afterwards weakened Russia, notwithstanding the restoration of the integrity and indivisibility of the empire, were ever furnishing the Poles with pretence and occasion for meddling with its internal affairs. During the deplorable anarchy caused by the false Demetriuses, they constantly, by the suggestions of a refined and ambitious policy, took part with one or the other usurper ; and, when at length the polish prince Vladislaf was called by their influence to the russian throne, they not only recaptured Smolensk, but even made themselves masters of Mosco. Indeed the election of a native prince, and the expulsion of the Poles from the capital restored order and tranquillity to the empire ; but once more, and for the last time, its independency was to be purchased. The peace which secured the throne to the new tzar Michaila Romanof, and dismissed the Poles from Russia, obliged that prince to relinquish the provinces of Smolensk, Severia, and Tschernigof. With this last degradation, however, the

polish influence ceased ; the preponderance of this state was gradually declining, and the inexorable Nemesis brought on the period when the Poles were obliged to do penance by a long series of misfortunes, even to the dissolution of their national existence, for their mistaken or ill-supported call to the dictature of the north.

Already under the successor of the politic but humiliated Michaila, Russia completed the wide circuit of her territories by reconquering her ravished provinces ; and the grand-dukedom of Kief, after a long separation, united again with the parent-state. In proportion as Russia, by the vigorous transformations of Pëter the great, increased in inward strength and outward consequence, Poland was sinking, through the defects of an ill-organised constitution, into a political imbecility, the consequences whereof were but too soon visible to the disadvantage of the nation. — The causes of this decline belong not to the plan of the present undertaking ; and the progress of the russian superiority, with the ultimate consequence of the unequal relation of the two states, has been already mentioned in its most essential periods.

According to the present state of the russian empire, the Poles, excepting the chief nation, form the most considerable part of the aggregate population.

population. They are either by millions together in the governments of Polotsk, Mohilef, Minsk, Brazlau, Vosnesensk, Podolia, Volhynia, Vilna, and Slonimsk; or in smaller numbers as colonists, in the circle of Selenghinsk, on the Irtysh, and in various other parts of the empire.

The russian Poles, like all the nations of Russia, enjoy their belief, and the liberty of external worship without any molestation; only they, no more than others, may not make profelytes from the greek church, nor hinder their brethren in the faith from voluntarily going over to the established persuasion. They enjoy moreover all the privileges of the predominant nation; and observe the manners and customs of their own country, as closely and as long as is agreeable to themselves. As all these, no less than their exterior and moral character is already known from other writers, I pass it by, with only this remark, that, the Poles being Slavonians as well as the Russians, both speaking the same language, only in a very different dialect, and in character, manners, and usages, having many things in common, the former more quickly assimilate with the latter than other nations of foreign extraction, speech, character, and manners; so as to incorporate as it were, and be united with them.

3. The third flavonian nation within the borders of Russia, are the SERVIANs or SERBES, a branch of the illyrian Slavi. By the denomination of Illyria, was originally understood no more than the eastern coast of the Adriatic. In the fourth century the appellation of Great-Illyria sprung up, which comprehended almost all the roman provinces in the eastern part of Europe, between the Adriatic and the Danube, and even quite to Pontus. At present that country is divided by its sovereignties into the venetian, hungarian, and turkish Illyria. Of the latter the kingdom of Servia is a part, having received its name from the inhabitants. The Turks call it Lafs Vilayeti, or Lazarus-land, because in the year 1365, when they subdued it, Lazarus was prince of Serbia. It formerly consisted of two provinces, the proper Serbia and Rascia, and the inhabitants were accordingly distinguished into Serbians and Rascians.

The Servians and Raitzes in the russian empire are colonists, to whom in the year 1754, a considerable district was allotted on the Dniepr near and upon the possessions of the zaporogian Kozaks. This country, which got the name of New Servia, was, for the most part, an uninhabited desert, extending to the then polish borders, by which it was surrounded on three sides.

fides. The Serbians who voluntarily settled here in considerable numbers, were formed into a military association, to be a check upon the dissensions and excesses of the Zaporogians. In the year 1764, the whole of this tract of country was erected into the government of New Russia, and at present forms a considerable part of the province of Ekatarinoflaf.

There are still two other tribes in the russian empire, which, notwithstanding the obscurity of their origin, are supposed to be related to the Slavi. These are, the LITHUANIANS and the LETTISH; the latter also comprise the KURES among them.

4. The lettish race, to which the Lettes, LITHUANIANS, and old-Prussians belong, was not a primitive stock, as the finnish, the germanic, or flavonian, but a distinct branch, now become incognizable, of the Slavi, which at the same time evinces a near affinity with the Vendi. The conformity of the lettish with the flavonian and old vendish language, and the sameness of their antient mythology, gives to this supposition a high degree of probability. — The appellative Litva, by which the Lithuanians call themselves, is found in Nestor's chronicle so early as the eleventh century, who enumerates the Lithua-

nians among the nations tributary to the russian monarchy ; which could not find means to render itself an independent nation till the time when dangerous intestine divisions sprang up in Russia under the successors of Vladimir the great. She freed then herself from the russian supremacy, enlarged her borders at the expence of her former masters, and at length grew to be a power, formidable alike to all her neighbours. In the thirteenth century Ringold first appears under the title of a sovereign grand-duke. His son Mendog profited by the tartarian incursions into Russia for marching forth to make conquests here : under him and his successors the whole of lithuanian Russia, together with Volhynia and other provinces *, fell off by degrees from Great Russia. Gedemin, one of the most renowned of these princes, drove the Tartars out of Kief, and subjected that grand-dukedom to him. Yaghello, one of his successors, of another race, caused himself to be baptized in 1386, married the polish queen Hedvig, and united Lithuania in perpetuity to the state of Poland ; in consequence of which union the conquered russian provinces devolved to that kingdom. Since that

* See the article, Russia and Poland.

period Lithuania has constantly followed the fortunes of Poland; and, with the gradual extinction of it, has likewise fallen a prey to her stronger and powerful neighbours.

At the partition of the year 1773 Lithuania furnished the whole share which Russia at that time obtained, and out of which the present viceroalties of Mohilef and Polotsk are formed. In the subsequent partition of the year 1793, this grand-duchy again lost 1731 square miles and 850,000 souls, which now belong to the viceroyalty of Minsk; but the larger portion which Russia got on this occasion, was taken from Little-Poland. In the final partition of the year 1795, the last remains of Lithuania also fell to the russian empire, of which at present the viceroalties of Vilna and Slonimsk are composed. These provinces of the russian empire are therefore those in which Lithuanians reside, but the number of people of which this nation consists can hardly be given with any degree of accuracy, as they are every where mingled with Russians and Poles.

5. The LETTES were originally one people with the Lithuanians. Both nations spoke the same language, (as even at present the lettish can only be considered as an altered dialect of the lithuanian,) and their very names seem in
fact

fact to be the same *. Till towards the end of the twelfth century Livonia or Lettland was entirely unknown to the german historians; it is mentioned only by Danes, Swedes, and Russians: by the two former on occasion of their piracies, and by the Russians for denoting their dominion over that country.

The provinces on the Baltic, now known by the names of Livonia, Esthonia, Kurland, and Semigallia, belonged in the earliest times to the russian state, and had even a share in the founding of it. Nestor †, the oldest and most authentic russian annalist, names at least among the tributary nations, Litva, Semigola, Kors, and

* We find in the accounts of the middle ages the following denominations used without distinction: Letthania, Letthovia, Littlavia, Litfonia, Lottavi, Littlvini, Letthovini, Litthvani, Lettones, &c. Probably the Lettes obtained their particular name from their first homestead. In the circle of Valk, not far from the town of Venden, a river named Leete takes its rise. This river is called in lettish *ta Latte*, and a Lette is, in their language *Latvis*, a man living by the river *Latte*. It is not unlikely that *Lettgallia*, so frequently mentioned in the annals, is from the same origin. *Leitis* means in lettish a Lithuanian, and *gals* the end, therefore the country which borders on Lithuania. *Tannaus*, hist. of Livonia and Esthonia, vol. i. p. 17.

† See an account of Nestor and his chronicle, &c. in the Selections from foreign literary Journals, printed for Debrett, 2 vols. 8vo. vol. ii. p. 293, & seq.

Lif:

Lif: that he does not expressly mention the Lettes may probably proceed from their not being at that time a particular nation distinct from the Lithuanians. The dominion of the Russians over these nations is thenceforward confirmed by several additional testimonies. When the Germans had settled in Livonia, Meinhard did not dare publicly to preach, till Vladimir, grand-duke of Polotzk had first granted him permission; "because (as Henry the Lette affirms) the "heathenish inhabitants were tributary to him." It is observed by the same native chronicler, that the Lettgallians are of the greek religion; and that the Russians in several places baptized the heathens. In the year 1209 bishop Albert openly shewed the supremacy of the russian grand-dukes, when in a treaty of commerce, which he entered upon through the teutonic knight Arnold, he gives security for the payment of the customary taxation, and in the year 1211, at the treaty of peace with Vladimir, he completely concedes the tribute.

Certain as it is, from these and many other indubitable testimonies, that the districts inhabited by Lettes on the Baltic (or on the varagian sea, as the russian annals say) already belonged to Russia in the earliest periods of its monarchy; it nevertheless appears, that Livonia had then no settled

fettled constitution, nor was bound to the parent state by any firm political tie. Satisfied if the tributary nations only paid their tribute, the russian grand-dukes, according to the custom of the age, left the civil constitution to the inclination of the Lettes, who therefore knew of no other magistracy than their elders, whom they still, from the flavonian term *Starfchina*, style *Starofts*: the Russians even made no opposition to the attempts of foreign conquerors, who were beginning to erect a new sovereignty here. Thus it happened, that these countries, particularly during the civil dissensions which preyed upon the vitals of Russia, gradually quitted their loose connection with that empire, and could not afterwards, notwithstanding the repeated efforts of the russian princes, be brought back to a reunion, till Peter the great revived the claim which belonged to his state from the very foundation of it in the true import of the word, and indeed by a transfer from the people.

To the rest of Europe Livonia remained generally unknown, till in the year 1158 it was discovered by some merchants of Bremen on their search for new branches of commerce towards the north. These mariners landed at the mouth of the Duna, opened a trade with the inhabitants, returned thither several times, and at length

length proceeded, with the consent of the natives, along the shore of the Duna, many miles up the country. About eighteen years after the discovery, an augustine monk, named Meinhard, settled in Livonia, who made the Livonians christians, and himself their bishop, whereupon many Germans at various times were induced to repair thither also. Towards the end of that century, Knut VI. king of Denmark, made an expedition to Esthonia, got possession of that province, and provided the converted inhabitants with priests and churches. For conquering and keeping Livonia, the bishop in the year 1201 founded the order of the Swordbrethren, a sort of knights Templars, and granted them the third part of the country with all rights and sovereignty. These knights were all Germans, who converted the natives to christianity with great success, though not without bloodshed, and made them their vassals. They afterwards united themselves with the teutonic order in Prussia, to whom Valdimar III. king of Denmark, in the year 1386, sold Esthonia for the sum of 18,000 marks of standard gold. In the year 1521 the livonian heermeister Plettenberg again separated from the teutonic order, and was admitted by the emperor Charles V. among the princes of the german empire. The
attempts

attempts made by tzar Ivan II. to reconquer these provinces which had been torn from the russian empire, and the weakness of the order, which felt itself not in a capacity to resist so powerful an enemy, at length in 1561 effected the complete separation of the livonian state. Esthonia put itself under the protection of Sweden, Livonia united with Poland, and Courland was a peculiar dukedom under polish supremacy, which the last heermeister Gotthard Kettler held as a fief of that crown.

From this æra Livonia became the unhappy object of contention, for which Sweden, Russia and Poland, for an entire century, were continually exhausting themselves in bloody wars. During this period it had once nearly become a peculiar kingdom *; but Sweden at last got the upperhand, and, at the peace of Oliva in 1660,

* Among the attempts made by tzar Ivan to obtain the sovereignty of Livonia, one was by making an offer to the danish prince Magnus, in the year 1596, of this country under the title of a kingdom, reserving to himself the paramount lordship, and an inconsiderable annual tribute. This proposal was enforced by a russian army of 25,000 men; and Magnus for a time actually styled himself king of Livonia. This project, however, by the war which broke out upon it with Sweden and Poland, terminated so unfortunately, that Ivan even lost his own possessions in Livonia, and Magnus obtained the bishopric of Pilten during his natural life.

added this province to the possession of Esthonia. Both countries finally, after a war of twenty years, came to the Russians by the treaty of Nyftadt in 1721, and form at present the vice-royalties of Riga and Reval.

The events of the duchy of Courland till the year 1561, are interwoven with the history of Livonia, as, from the time of its conquest by the knights of the cross, it constituted a part of the livonian state. Gotthard Kettler, as above related, snatched from its ruins the new-erected dukedom as his proper spoil; and, from that period Courland appears in history as a peculiar state. On the extinction of Kettler's male race the estates of Poland endeavoured to sieze upon Courland as a lapsed fief, and to unite it immediately with the kingdom; but the courish nobility preserved to themselves, by the aid of the russian court, the right of electing a new duke. Their choice in 1737 fell on count Ernest John von Biren, who was succeeded in the government by his son Peter. — As, on the total dissolution of the kingdom of Poland, the feudal connexion with it fell off of course, and the duchy, in its declining condition, thinking it could not subsist without a more powerful patronage, the estates of the country agreed in the
year

year 1795 by a free resolution * to consider the feudal constitution as demolished, and unconditionally to submit themselves to the empress of Russia. Their example was followed by the bishopric of Pilten which had stood immediately under the crown of Poland.

The fate of polish Livonia deserves a brief notice here. This tract of country, which, under the government of the teutonic order, formed likewise a part of the livonian state, reverted in the year 1561, with the whole province of that name, to Poland. At the peace of Oliva, by which Livonia came under the sovereignty of Sweden, this sole district however remained to the polish state, retaining from that time its name in contradistinction to swedish Livonia. On the partition of 1773, this country, which had hitherto constituted its particular voivodeship, was annexed to Russia, and now comprehends the two circles of Dunaburg and Resitza in the viceroyalty of Polotsk.

We will now once more survey the tracts of the russian empire which are inhabited by Lettes. The homestead of this nation is not the whole of Livonia, but only a part of it which is called

* See Life of the Empress Catharine II. vol. iii.

Lettland * ; the Kures in Courland, Semigallia, and the bishopric of Pilten are true Lettes ; by whom, in part, the lettish language is spoken in the greatest purity : but this people is mostly degenerated in polish Livonia, where they are mixed with Poles and Russians †. The number of them at present, for want of proper statements, cannot be accurately ascertained ; but in the viceroyalty of Riga alone, there were upwards of 226,000 Lettes, according to the last census.

At present they are no longer known as a separate people ; they were mingled by imperceptible degrees, and at last blended with the Lettes, the Esthes, and the Coures, or, as we usually call them, the Lettonians, the Esthonians, and Courlanders. The most visible remnant of them is at Salis, where, in conversation with others, in the churches and schools, they speak the lettish language ; but in their houses and among themselves they use the antient lievish. The Liefs

* Livonia, or the present viceroyalty of Riga, consists of nine districts or circles, of which four compose what is properly termed Lettland. The remaining five circles are inhabited by Esthonians

† Even the nobility, which, as in all the other parts of the antient livonian state, is originally german, has, under the polish supremacy disused the german language, and adopted that of the Poles.

that were some time ago discovered on the sea-shores in Courland have been thought, and not without reason, to be run-away boors from Salis. To conclude, in regard to their exterior there is now no visible difference between them and the Lettes.

The Lettes, or Lettonians, a people always peaceable, industrious, hospitable, frugal, and of somewhat better dispositions than the Esthoni-ans, inhabited the greater part of the Venden district, and extended themselves even into Dorpat; and therefore it is, that the chronicles mention the Lettes in Ungannia. That they were at all times a nation entirely distinct from the Liefs and Esthes is evinced by their language, some particular customs, the general concurrence of history, and the implacable hatred of the two last-mentioned nations against them, which they were constantly exercising in scorn and oppression. That aversion even still seems not to be extinct; for the Liefs that live among them do not willingly intermarry with them, and the Esthes are very apt to deride and despise them.

Their origin has been at one time sought for among the grecian, and at others among the sarmatian tribes. Without meddling with the controversy whether they were formerly called
Latzians,

Latzians, or were driven out by the Persians, we perceive by their language, that they are of affinity with the Courlanders, or Coures, and properly of lithuanian, or in general of flavonian origin. In their language we find a mixture of other people, as it contains many words borrowed from the russian, the polish, the esthonian, the german, and even some apparently from the latin; which may be accounted for from their derivation, their migrations, and their mixture with other people. At present they occupy two districts, which both together, after them, are called Lettland. By the augmentation they received from the Liefs, (now reckoned with the Lettes,) the Vendes, the Lettgallians, and the Esthonians, they are now more numerous than they were in the twelfth century. The Lettes call themselves Latweetis.

The Lithuanians live in the government of Polotsk and Moghilef: they, as well as the Lettonians, are intermixed with Slavonians and Finns, but chiefly with the latter, and are of the same confession with the Poles.

SECTION II.

Finns.

A SECOND main stem of the nations dwelling in Russia is that of the FINNS, of which, though not one branch (the Hungarians excepted; if we choose to reckon them among them) has ever risen to a ruling nation; yet, as the common stock of most of the northern nations of Europe, is exceedingly remarkable for its antiquity and its wide extent, from Scandinavia to a great distance in the asiatic regions of the north; and thence again to the shores of the Volga and the Caspian. Dispersed as all the finnish nations are in this prodigious space, yet the resemblance, in bodily frame, in national character, in language, and in manners is preserved. It is scarcely less remarkable, that the generality of the finnish races still dwell only in the north, which has ever been their favourite abode, and on which account they are likewise called inhabitants of morasses or fens; and the chase and the fishery have ever been with each of them their chief occupation and trade. So great a resemblance seems to leave us in no doubt concerning the common descent of the nations that fall under this division of our work; which of them, however, is properly the parent stock, can hardly be decided. The aboriginal name FINNS, already known

known to Tacitus, is in use with none of these nations ; but they call themselves by a different appellation.

As uncertain as the proper and original denomination of this people is, not less obscure are also their origin and the early events that befel them.

None of these nations, some of them of very great antiquity, numerous, and far extended, (the Magyares excepted,) has ever played a conspicuous part on the theatre of the world ; no one of them has ever acquired a lasting independency, or produced a hero : but they have all, as far back as authentic history reaches, been a prey to their more enterprising and powerful neighbours. Accordingly they have no chronicles of their own ; and their history is only to be found in the annals of their conquerors.

On taking a survey of the whole extent of Scandinavia and Russia, which is stored with finnish nations, it is easy for the mind to conceive how the parent stem might come from the borders of Asia to the Baltic, then to have roamed along the northern coast of that sea, and to have spread on both sides of it deep into the south, till in process of time it penetrated, here by Lettes and Slavonians, there by german Scandinavians, far into the north. But probable as this hypothesis may be, few data for its confirmation are to be met with in history. It

names to us, indeed, from the ninth and the twelfth centuries, the Permians, the Finns, the Laplanders, and a few other tribes, which now are no longer known, or at least solely by their names : but even of these we find only scattered accounts in the annals of the people who were concerned in trade with them ; and the other finnish races on the Volga and in Siberia have not been discovered till the recent progress of the Russians into those parts. All therefore that is known of their antient history is this, that they possessed the greater part of Scandinavia and Russia in the north, and separated into several tribes, which either lived entirely without any government, or, like the Permians and proper Finns, under their own kings. — All these were gradually subjugated by three nations, under the dominion of whom they still remain : the Norwegians, the Russians, and the Swedes.

The NORWEGIANS were the first who subjected a part of the finnish north. Finmark has ever been tributary to them ; yet it appears that long before the commencement of the tenth century, the whole tract from Vardhuys to the White-sea was independent of them ; and that only the remoter Finns about the gulfs of Bothnia and Finland, and on the Dvina, obtained their national freedom. The enterprising Norwegians were not content with letting out the conquered countries

countries to vassals, but they advanced to the independent districts, particularly to Permia, partly for the sake of commerce, and partly for the purposes of rapine and spoil. These expeditions to Permia, which in time became regularly made every year, were first checked by the incursions of the Mongoles into Russia, and at length entirely ceased, when the princes of Novgorod made themselves masters of that country, and the commerce of those parts.

The second nation which dispersed itself in the finnish parts of the north, were the RUSSIANS; who, though at first, on their settling about the Volkhof, lived on good terms with their neighbours the Tschudes or Finns, and even elected a government conjointly with them, yet they afterwards, later than the Norwegians, and earlier than the Swedes, conquered and subdued them.

Karelia, together with a part of Kexholm, seems to have been the first district of which the Russians of Ingria made themselves masters. Wherefore all the russian Finns, even such as neither in regard to their place of habitation nor their descent were Karelians, but not till a later period were mastered by the Russians, were formerly called by the Norwegians Kyrialians. The Russians at first had nothing but the region about the gulf of Finland, or on the Kyrialabotn, and about the Ladoga lake, quite up to the

White-sea. They afterwards spread farther round in these desert countries, where nothing was fixed by stated limits, and subjected to them a part of Finland. On the incursion of the Mongoles, the expeditions of the Norwegians to Permia ceased : and now the Novgorodians began also to spread themselves farther to the north ; and in the fourteenth century Permia was converted to the christian faith by bishop Stephen.

Probably at the same time some Permians fled across the White-sea to escape this fiery zeal for making proselytes ; and thus gave the Russians, who pursued their fugitives, the first occasion for establishing themselves in Lapland. The latter now soon began to quarrel with the norwegian bailiffs, whose business it was to collect the tribute in these parts. They proceeded to acts of violence, and war began on the borders ; when the Russians, who were nearer and more powerful, obtained the advantage. They took in the sequel, not only all Lappmark round Kola, but proceeded so far as to levy a tribute on the Finns in the present Finmark, and of those who dwelt in Trumfen as far as Malanger. The other finnish nations in the east, on the Volga and in Siberia, became subject to them, with their gradual extension in these regions, by the conquest of the tartar kingdoms and the discovery of Siberia.

The

The **SWEDES** were the last who founded a sovereignty in the finnish parts of the north. It was not till the middle of the twelfth century that Erik the saint subjugated and converted the proper Finns; a hundred years afterwards the Swedes set foot in Tavastland; towards the end of the thirteenth century they established themselves in Karelia; and about the same time the Laplanders were also reduced to their obedience.

Thus then the whole of the finnish north was partitioned among three sovereigns, and the nation itself was removed from the rank of independent people. — We now leave the stationary point from which we surveyed the whole of its territory, because henceforward there are norwegian, swedish, and russian Finns, and only the last are here the object of our attention. Of the thirteen tribes into which the finnish stock divided, twelve belong either wholly or in part to the inhabitants of the russian empire, namely, the Laplanders, the Finns, the Esthonians, the Livonians, Tschheremisses, Tschuvasches, Mordvines, Votiaks, Permiaks, Suryanes, Vogouls, and Kondish Ostiaks. The Madshares alone*, the
great

* Magyar, as they call themselves, or Ugrians, as they are termed in the russian year-books, of which the modern Europeans have made Hungarians. — Schlötzer reckons no more than twelve finnish nations, for he excludes the
Tschuvasches

great mass of the mixed multitudes whom we at present call Hungarians, are the only finnish nation which belongs not to Russia, and also the only one that has preserved its national independence.

1. The LAPPES or LAPLANDERS inhabit the extremities of the scandinavian parts of the north-eastward to the White-sea, between the 65th and the 75th degr. of north lat. Saxo Grammaticus, an historian of the twelfth century, mentions them first under this name, which signifies a forcerer, and was given them by the Swedes ; having been formerly comprised under the general denomination of Quenlanders or Kayanians. They call themselves Sabme-ladzh, (in the plural number Same,) and their country Same-ednam.

The modern Lapland, a country abounding in mountainous forests and lakes, is divided into the norwegian, swedish, and russian Lapland. To Norway belongs the north-western, to Sweden the southern, and to Russia the eastern part.

Tschuvasches from that stock, though he formerly joined them with it. Even this critical inquirer into history thinks the Finns an european parent-stock, (according to the interpretation which he gives to these words, *quos aliunde venisse nulla memoria est*,) as they possess almost the whole north of Europe, from Norway as far as the Ural ; whereas the asiatic Finns seem to be only branches broken off.

According

According to the political distribution of the russian empire, russian Lapland forms only one circle of the viceroyalty of Archangel, the chief town of which is Kola, and is about 1000 versts in diameter. The number of the russian Laplanders, called by the Russians Lopari, amounts to not much above 1200 families. When and in what manner this people probably came under the russian government has been already noticed.

Schober, in his *Memorabilia Russico-Asiatica*, relates the story of a Laplander, who had lived some time at Astrakhan *. This Laplander, on account of his uncommonly capacious memory, was the wonder of his time. He had been privately stolen away from his native country, when very young, and brought up at Stockholm; Charles XI. sent him afterwards, with a considerable stipend, to Wittenberg, in order to study theology. It was thought he might be usefully employed as a missionary to preach the gospel to the Laplanders in their own tongue. Having finished his academical studies, he returned to Stockholm; where, on being examined at court, he was found to speak latin readily, though in general faultily. He preached without hesitation,

* He is also spoken of by Weber, in *veranderten Russland*, vol. ii. p. 165.

but also without sense. The ministry of Stockholm thought him capable of undertaking, under the divine blessing, the work of conversion in his own country, and ordained him accordingly to make profelytes in Lapland.

The converter of the heathen being arrived among his countrymen, found that rein-deer-milk and dried fish were no longer to his palate. Scarcely had he been there half a year, but he mounted a rein-deer, forfook his miserable country, presented himself at Stockholm in the dress of a common Laplander, and got a few pence from the populace by making a show of his beast. Falling into extreme contempt by this degrading employment, he determined to repair to Denmark. About the year 1704, he made his entry into Copenhagen, sitting on his rein-deer, amidst a prodigious concourse of people. He was conducted to the presence of the king, to whom he gave himself out for a lapland prince: the people of the court made merry with him, and kept him generally drunk with wine and brandy. Under the same title he travelled into Germany, visited the principal courts, and was seldom sober. From Germany he proceeded to France, where, in one month he learnt the french language, and received very handsome presents from Lewis XIV. ; thence he returned
to

to Germany; and then traversing Poland, he came into Russia.

He had been only six weeks in St. Petersburg, when he was able to express himself with tolerable facility in the Russian language, even so as to preach in it before Peter the great, the archbishop of the province, and the great officers of state. The emperor bestowed on him a yearly pension of 250 rubles, and sent him to Astrakhan, in order to learn the Tartarian language, which consisting of various dialects, is accordingly very difficult. He was actually master of it in a very short time so as to speak it fluently. But, living very loosely in Astrakhan, and being frequently seen lying asleep in the streets, drunk and senseless; he was one day taken up by the Kalmuks, and privately conveyed out of town. He was brought before the khan Ayuka. The khan ordered his crown to be shaven in the manner of the Kalmuks, had him dressed in the Kalmuk fashion, and gave him two wives, both of whom were soon pregnant by him. He had hardly been four weeks among these people, ere he not only understood them, but also in case of necessity would talk intelligibly to them. The Kalmuks gave him horses, took him with them on their hunting-parties, lived, ate, and played with him, and had not the slightest idea that

he would ever quit them. But as soon as he saw an opportunity, he made his escape, and returned to Astrakhan.

In this place he afterwards made himself master of the persian, and the language of the subjects of the great Mongole; he also spoke the modern greek: but his dissolute life, and his daily drunkenness, cut him off in the flower of his age.

Saxo Grammaticus, who flourished about the close of the twelfth century, is the first writer that speaks of this country and its inhabitants; but, says M. de Voltaire, it was not till the sixteenth century that we began to get any rude knowledge of Lapland, concerning which even the Russians, the Danes, and the Swedes had but very faint notions.

This vast country, bordering on the pole, had only been noticed by the antient geographers under the names of the country of the Cynocephali, of the Himantopodes, of the Troglodytes, and of the Pygmies. Indeed we have learnt from the accounts given by both swedish and danish authors, that the race of Pygmies is by no means fabulous; for, that they had found them near the pole, in an idolatrous country, covered with mountains, rocks, and snow, and overrun with wolves, elks, bears, ermines, and rein-deers.

The

The Laplanders, (continues M. de Voltaire,) from the universal testimony of travellers, seem to have no relation to the Finns, from whom they are made to descend, nor from any of the neighbouring people. The men in Finland, in Norway, in Sweden, in Russia, are blonds, large and well-made ; Lapland produces none but men of three cubits in height, pale, swarthy, with short, harsh, and black hair ; the smallness of their head, their eyes, their ears, their nose, their belly, their thighs, and their feet, distinguishes them entirely from all the people that surround their deserts.

They seem to be a particular species formed for the climate they inhabit, which they love, and which they alone could love. Nature, who has put rein-deer no where but in this country, seems to have produced the Laplanders there ; and, as their rein-deer are not in being elsewhere, neither do the Laplanders appear to have come from any other country. It is not probable, that the inhabitants of a country less savage should have forced their way over mountains and deserts of ice, for the sake of transplanting themselves in regions so barren, and so dark, that it is impossible to see clearly for three months in the year, and where the inhabitants must be perpetually changing their stations, in order

order to find the means of subsistence. A family may be thrown by a tempest on a desert isle, and may people it; but it is not natural to quit habitations on the continent which produce some nourishment, to go and settle a great way off, upon rocks covered only with moss, in a dreary region of incessant frosts, amidst precipices of ice and snow, where there is no food but reindeer's milk and dried fish, and debarred from all commerce with the rest of the world.

Besides, if the Finns, the Norwegians, the Russians, the Swedes, the Icelanders, people as far to the north as the Laplanders had emigrated to Lapland, would their figures have been absolutely changed? It should seem then that the Laplanders are a new species of men, who for the first time presented themselves to our view and our observations in the sixteenth century, while Asia and America offered to our sight such numbers of other people, of whom we had no great knowledge. Thereforeforward the sphere of nature has enlarged itself on all hands to us, and it is therefore that Lapland is become an object truly worthy of our observation.

But to this it may be replied, that, if the natives of Lapland were of a different species from other men, we must admit the eternity of matter with the men born in different countries,
and

and begotten by others, without being able, whatever retrogradations we might make, to discover their first generation, unless we have recourse to the fiction of the poets, for a people

. qui rupto robore nati,
Compositique luto, nullos habuere parentes.

The information contained in the writings of Moses apparently shews that these systems, with those that the antient philosophers have invented, on the origin of the human species, are so many fond conceits and falsehoods.

The greatest difficulty lies in knowing how the children of Adam and Eve, who were white, could possibly have given birth to black men. But this difficulty has been solved in the preliminary dissertation to the Universal History, and in that of M. de Maupertuis on the white negro. They prove that the difference and the diversity of climate, a greater or less distance from the sun, &c. have produced this effect; and it is what experience confirms, at least by analogy.

2. The FINNS, in the stricter signification, were already known by this name to Tacitus, which has been preserved by the geographers and historians of later times, though without any accurate knowledge of the people. Properly they

were not again discovered till the year 1157, when the swedish king Erich the saint undertook their subjugation and conversion. They call themselves in their language Suoma-lainen, i. e. people who live in morasses; and their country Suomen-Sari, which signifies a marshy country with islands. Whence the name Finns arose is unknown *. By the Russians they are denominated Fini, but more usually Tschuchontzi or Maimisti, nasty people. The Ingrians, a particular description of finnish boors who have long dwelt amongst the Russians, and have adopted many of their customs with their language, as well as the greek religion, are still called in russ Ishorki, from the river Ishora or Inger, from which Ingermanland or Ingria has its name. They live likewise in the neighbourhood of Valday and Beyetfk, and are generally of the lutheran communion.

The country which is inhabited by this nation comprises the north-eastern corner of the bothnic and finnish gulfs, interspersed throughout with rocks, mountains, morasses, and lakes, between the 60th and 65th deg. of north lat. its circumference being computed at 30,000 versts. The greater part of it belongs to the kingdom of

* So says Schlœtzer. Georgi is of opinion that this is the gothic translation of Suoma.

Sweden; the smaller south-eastern portion possessed by Russia, contains Ingermanland, Kexholm, and Karelia, forming the government of Viborg, and part of that of St. Petersburg. — That the Finns, in a very remote period, lived under their own kings, has been already seen, as well as that the Russians very early got firm footing here, and formerly possessed far more than their present share. In after-times these territories were again lost; and Michaila Romanof ceded to Sweden the last Russian possessions in Finland; but, by the treaties of Niesstadt and Abo, Russia got back the forementioned part of it.

In the government of Viborg the Finns make by far the greater part of the inhabitants, or more properly they are the people of the country. In most of the circles of the Petersburg-government, they, with the Ingrians, are likewise the main body of the population; and in the governments of Tver and Novgorod they form considerable colonies, which have long been settled in these regions. The number of all the Finns living in Russia is not to be correctly ascertained; but they probably exceed 400,000 heads. — This people and the Laplanders are moreover the only two Finnish nations, whose lot has been cast under several sovereigns; all the other branches

of this stock belonging exclusively to the russian empire.

3. On the southern coast of the gulf of Finland, over against Finland proper, dwell the ESTHONIANS. This name, of like import with orientals, is of german origin; many other nations of the Baltic bore it; by Tacitus and Cassiodorus it is employed to denote the borderers on the Amber-strands: at length, however, it was confined to designate the small tract of the forementioned coast. The Esthonians have no name for themselves collectively, but supply that defect either by *Maa Rahvast*, people of the country; inhabitant (in the singular number, *Maa Mees*); or if they would speak more particularly, *Tarto Rahvast*, *Perno Rahvast*, people of Dorpat, of Pernäü, &c. * In the russian annals, where they play a considerable part, as they, in common with the novgorodian Slavi, founded the russian state, they are called *Tschudes*. From them to this day the Peipus lake is called in rufs *Tschudskoie ozero*, the *Tschudish lake*.

That also this people, in the remotest times, belonged to the russian monarchy, is beyond all doubt. During the intestine commotions with

* The Finns are called in the esthonian, *Somè Rahvast*, or *Somlanè*.

which

which the grand-dukes had to contend among them, the Tschudes indeed gradually succeeded in withdrawing themselves from this sovereignty ; but, we also learn from history, that the russian princes at several times found means to assert their right with vigour, and to compel the Esthonians by force to acknowledge it. Thus, for example, Yaroslav found himself under the necessity to wage war upon the Tschudes, and in the year 1030 to build Dorpat, (or Yurief, as the Russians still call that town,) that he might have a strong place in the heart of their country, for the reception of the imposts, and perhaps for keeping a garrison in it. So Mstislaf marched against the Tschudes and Semgallians, on his reviving his demand of the tribute which they had been wont to pay : likewise in the annals of the neighbouring nations we find frequent evidence that no one ever doubted of the supremacy of the russian princes over these countries.

The most remarkable of the catastrophes that befel the Esthonians have already been noticed in the history of the Lettes. Since the year 1386, when Esthonia was sold to the Teutonic-order, it has formed a part of the livonian state, with which, after a separation of a hundred years, when it was under the dominion of Sweden, it again fell to the latter, and afterwards was

united to the russian territory. The antient duchy of Esthonia forms, in the present constitution of the russian empire, the government of Reval; not only this province, however, but also the greater part of Livonia, or five circles of the Riga-government, are inhabited by Esthonians. Their numbers in the former government can only be probably computed at 180,000; in the latter, by the last enumeration, were upwards of 257,000 heads. We shall certainly therefore not be mistaken in stating their total amount at 430,000.

The Esthes or Esthonians, in the lettish language Iggaunis, have ever been the most extensive and the most populous nation of Liefland; who, besides Esthonia properly so called, inhabited the districts of Dorpat and Pernau, and still maintain their settlement in them to this day. They even made frequent attempts to get firm footing in Lettland; but they were as often repulsed by the Teutonic order of knights, under their master Volquin, who repeatedly drove them back to their antient seats. Their language, manners, bodily figure, houses, methods of husbandry, are so many incontrovertible proofs of their relationship to the Finns; whom M. Schloetzer justly pronounces to be one of the most far-spread nations of the globe, inhabiting,
from

from the shores of the Baltic, to regions deeply situated in Asia. It is therefore no wonder that some Livonians have found nations in the heart of Russia, whose speech, by the help of some acquaintance with the esthonian, they could partly understand; since the Finns, the Laplanders, the Esthonians, Livonians, Permians, Syranes, Ingrians, Votiaks, Tschuvasches, Tschermisses, Mordvines, and others, are described as nations of one common pedigree. The Esthonians are the Tschudi; from which appellation perhaps is derived the word Tschuchma, still used by the Russians to express a liefland boor.

Their conversion, or more properly their compulsion, cost the Germans much labour. Accustomed to war, to piracy, and to liberty, they long disdained and resisted their insolent authority. Some sparks of that martial spirit, now almost extinct, shew themselves, however, at times, in their fits of ebriety and revenge; and a relic perhaps of their old disposition to piracies and hostile attacks on the neighbouring provinces may be seen in their present propensity to theft.

Great wisdom is not to be looked for among folks entirely occupied in the affairs of agriculture, pasturage, and fishing. Neither the esthonian nor the lettish languages have as yet been

unfolded and enriched by art or science ; they are greatly deficient, especially the esthonian, in particular expressions ; so that it must often be a difficult task to a village-preacher, to publish an edict in a faithful translation, or to deliver a dogmatical discourse to his parishioners, unless he be peculiarly endowed with the grace of condescension. Many a boor would accept of freedom with heartfelt gratitude ; but neither gratitude nor freedom can the Esthonian express in his language ; no more than he can existence, duration, space, and other abstracted ideas. Among them are found persons of great simplicity, especially such as live apart in the forests : the greater part are artful, (the Esthonian more than the Lette,) easily comprehend a proposition not lying too far beyond their sphere, and frequently discover unexpected capacities only waiting for an occasion to call them forth. Those on the sea-coast have always been able seamen, who, without previous instruction, venture far out to sea, in vessels of wretched construction. In a short space of time, often within the compass of three or four weeks, they learn to read, and are dexterous in stealing an art from the german mechanics ; accordingly we find among them goldsmiths, ship-builders, tanners, expert cooks, huntsmen, &c. Under the swedish government, when

when the country was roused to support the feudal banner, they were useful soldiers. At the beginning of the present century, according to the current report, a boor of the district of Dorpat raised of himself a regiment, and signalized himself so much at the head of it, that he received a patent of nobility, with a haak of land, as the reward of his generosity and valour. Several have obtained baronies and military rank for their services in war ; or, having successfully applied themselves to the sciences, have been put into various offices : persons of great consideration are now living, whose fathers or grandfathers were alienable boors. Very few lords will allow their boors to learn to write ; fearing perhaps they may abuse that talent ; they might be tempted to forge a passport or letters of emancipation. Some therefore teach themselves to write, without any help from others ; and even under the total want of that art, they can keep, in a most surprising manner, long accounts of a hundred various matters, on sticks or tallies. About things of which they do not directly see the utility, they seldom give themselves any concern ; and what they do not comprehend they admire but coldly. Children that are early become orphans scarcely know, at the age of 20, the names of their parents. It is too much the custom for school-boys to offer their pastor some
flax,

flax, butter, or honey, to let them soon out of school, and not force them to learn to read ; to which end they are likewise very apt to feign all sorts of infirmities, such as hardness of hearing, dimness of sight, weak memories, &c. but especially of pretending to have a great fall or a blow on the head. These and the like pretexts, however, become less frequent from day to day by the present scholastic institutions, and will entirely be removed when there is a school in every village, or every farm shall instruct its own children. To send little children four or five miles off to school with their provisions in their pouch, is too much for the poor vassal, who has scarcely the means for finding them in necessary clothes ; grown up lads have no time to spare for school, and would get the worse for sitting still, to which they are not accustomed. A knowledge of the moral duties of religion, suited to their capacities, is soon obtained by old and young ; yet however it be, scarcely two in a thousand can tell whether they be christians or not ; unless it arises from this, that they are taught to conceive of religion as something different from the leading a good life. The proverb in use among them, “ He knows not what faith he is of,” does not merely imply a completely stupid fellow ; for they would all reply that they are of the country-faith, or of the parish-faith. Those who live
among

among the Russians, on the borders, frequently adopt their domestic and ecclesiastical usages from them.

In Esthonia are a great many large villages, some containing from 40 to 70 little clans; and with the stragglers may amount to a hundred distinct households: most of the Lettes live separate. Even the Esthonians at times shew a hankering after this primitive way of life, by which they are not exposed to the inconvenience of keeping every one his own cow-herd, and at least an old woman to look after the housekeeping; on the contrary they are less confined, have fields, meadows, and pastures near them, and suffer no damage from their neighbour's cattle. They have a particular affection to the woody districts, both for the sake of having a supply of firewood at hand, and an opportunity of clearing new fields whenever they please. One of these stragglers, or bush-boors as they are called, will not easily be persuaded to come and live in a village at a distance from a forest, though offered a far more fertile soil to cultivate, because there they can unobserved be continually laying out new ground in corn and hay fields, without paying any thing for them. Inferior landlords, who exact but little work from such people, run the risk of soon perceiving a want of stewards; and there have been instances of their letting the
the

the estate go to ruin, or even of setting their houses on fire, in order to have a pretence for turning straggler and enjoying the conveniences attending that way of life. For in that case they only work two days in the week at most for their lord ; the rest of their time is spent in idleness, or in working for their own profit : but in general they will only work when pinched by hunger, and the steward must give them, for small service, a piece of copse, beside finding him in meat and corn. To impose much work on the straggler seems, on the other hand, very cruel, as he has no land from the manor, and must maintain himself and his children by his own labour. They and their children are sometimes sold, or bartered against other things, horses, dogs, tobacco-pipe heads, in which the gentry here are very curious, as far as a hundred rubles being often given for one. A man here will not fetch so much money as a negro in the West-Indies ; one buys a fellow here for 30 to 50 rubles ; if he understand any business, shoemaker, taylor, cook, weaver, &c. he may sell for 100 rubles ; you will pay about the same rate for a whole clan, one with another, the parents with the children ; for a stout girl seldom more than 10, and for a child it may be 4 rubles.

Whether the proper names that appear in their old chronicles be the appellatives of entire castles

or races, or of individuals, I cannot take upon me to determine. The fondness that many boors have for naming themselves after the piece of ground possessed by their forefathers for a long time, or at least to retain the father's name, seems to favour the supposition, that a kind of family-name was not formerly quite unknown to them : perhaps, if it were of any consequence, we might find them again in the names of different villages and farms, from which, as well as from animals, &c. they seem to be borrowed. Proper family-names, as we now bear them, nobody will expect to find in Livonia earlier than the twelfth century. At present the baptismal name always stands last ; that of the farm, the father, or the landlord first : for example ; an Esthonian of the name Mik, living at a place called Mutta, calls himself Mutta Mik ; his son bears the name Mutta Mikko Pong *, and his son, Mutta Mikko Pong Rein ; and so his daughter, servant, step-son, &c. The vassals change their name with every new landlord, or call themselves after their fathers. Even a farmer must change his name whenever another plot of ground is given him to cultivate, unless he receive express permission from his lord to retain the old, or his father's name. Vassals that are made free commonly take a family-name, bor-

* Son.

rowed from their former place, or their father's : for instance ; Hans, the son of Hunti Laur, is made free. He now assumes the name Hans Hunt ; or, because the latter word signifies Wolf, Hans Wolff, or Hans Laurson. Their usual christian names, among others, are :

	Ethnisch.	Lettisch.
Adam	Adam, Ado, Oado	Adam
Agnes	Neto	
Anthony	Tœnnis, Tœnno, Tœns	Antins
Anne	An, Anno	An
Barbara	Warbo, Papo	Babbe, Babba, Barbel
Bartholomew	Pærtel, Pert, Pero	Behrtuls, Behrtmeis
Brigit	Pirrit	Birte, Brihte
Daniel	Tanni	
Dorothy	Tio	Dahrte
Elizabeth	Ello, Els, Lifo	Ilse, Lihs
Eve	Eva	Yeva
George	Yurri	Yirri, Yurris
Gertrude	Kert, Truto	Geddo, Gehrte
Hedwig	Edo	Edde
Hellen	Leno	Lena
Henry	Hin, Hinno, Hinrik	Indriks
Jacob	Yakob, Yaak, Yoak	Yehkobs, Yahks
John	Yaan, Yoan, Yuhan, Hans	Anfis, Antzis
Katharine	Kai, Kaddri, Trino	Katrihn, Trihne, Katsha
Charles	Kaarl, Karel	Karl
Magdalene	Madli, Mádle, Mal	Magdalena, Lena
Mary	Mai, Marri, Mairet	Marri
Margaret	Kreet, Krœcet	Kret, Mahrgeet
Peter	Peter, Peet, Peeto	Peet, Peter
Sibyl	Pil	Bille.

The

The masculine appellatives, Koort, Pell, Kæært, Tin; and the feminine Kell, and one very common in some places, Eile, in Esthonia; and the Lettish, Lafhe, Ebb, which some interpret by Lucia and Ebertina, I do not presume to translate.

Rich boors would be sought for here in vain. Such as (in secret) possess a few hundred rubles in hard cash, with moveables to the value of a hundred or two more, are here and there to be found; they even sometimes are worth more than their masters; but then they must not let it be known. Some have just enough to satisfy the first wants of life; but still more are poor. Formerly they were all much better provided. Among the Lettes, the landed property is not divided into small estates, but remains in the hands of a few overgrown nobles, who, living in great opulence, neglect to look after the management of their country possessions, so that the produce of them does not amount to one third of what, with moderate attention and care, they might, to the great detriment of the proprietor himself, to the state at large, and to the poor peasants, who, though for the most part, more industrious than the Esthoniâns, are generally in the extremest poverty. The latter neither want land nor an opportunity of making money,

if they have but time and inclination. The day-labourer, all the winter through, can earn his 10 kopeeks, and even more, by cutting wood and other employments, and in harvest time may get weekly a couple of bushels of corn. The forests, the breeding of cattle, the towns, the manor-houses, the chace, and agriculture, furnish them with opportunities enough for earning something. Only by spinning for pay, the females find but little advantage; and yet in winter there is scarcely any thing else for them to do: in the worst parts of the country they grow as much flax as will keep them in work during the whole of the long winter. The Esthonian has often been reproached with laziness: charity might lead us to suppose that bondage and oppression may have an influence on him, as well as on the Lettes; but he shews it even when working for himself: perhaps his feudal service habituates him to it. And yet, both in town and country, there are great numbers who shew themselves industrious, and pursue their own benefit with activity and diligence. The failure of a crop, diseases among the cattle and horses, soon reduce a boor to poverty; whom all the assistance he can get from the manorial messuage will not restore to his former condition. A man may have two horses and a

few

few cows, and yet be very poor. How wretched are even they who are called landlords, or hosts, of the farm, who have nothing but a horse lent them from the manor ! Creditable boors, possess, according to the quantity of their ground, from 5 to 10 horses, and a herd of between 30 and 40 head of horned cattle. Both poor and rich eat chaff-bread, that is, without separating the chaff from the rye ; after threshing, they grind and bake them both together. In those parts of the country where the ungrateful soil rewards the labourer with but a sorry crop, or the arable land is allotted the people in too great a disproportion, both the Lettonians and the Esthonians feed on the vilest bread imaginable, fit for nothing but to burn, for it takes fire immediately on application to it : it is only on holidays that they bake a little bread of wheat or cleansed rye, but never bolted. When their spirits and their pride are elated by strong liquors, or sometimes when they have a good-natured master, they are apt to betray their property, which at all other times they do what they can to conceal, lest their work should be increased, or, after their death, an unwelcome hæres universalis ab intestato should come in for at least an equal share with their children, which, it is to be hoped,

does not frequently happen in our enlightened days.

None of the people here are comparable to the german peasants in muscular force, particularly as to lifting or carrying burdens, which, perhaps, may be owing to their habits of laziness, and their miserable diet. But they will hold out in great labours surprisingly; they bear vicissitudes of cold, heat, and continued wet, that would kill an Englishman or a German, and do a great deal of work, with little sleep. Their climate, their hard manner of life, together with early habitude, may contribute much to this, but especially their hot-baths, in which practice they run out of the extremes of heat, stark naked, into the open air, in summer plunging into a river, and in winter rolling themselves in the snow. Rheums, defluxions, colds, tooth-achs, ear-achs, &c. are but rarely heard of among them. With good-living their bodies soon get a sort of plumpness; but a truly fat man would be a strange sight indeed. Their stature is rather under than over the common size, and many of the women are unusually short. A tall fellow is sometimes to be met with.

Some authors deny them to possess either virtue or conscience, chiefly because they have

no word in their language to denote them. But this is a manifest exaggeration. It is true the Esthonian, as well as the Lette, terms conscience, by a periphrasis, the testimony of the heart; and virtue he expresses by good actions: but, for love, pity, patience, placability, gentleness, forbearance, and the like, they have their own proper terms. As in all other countries, there are very honest worthy people, among some that are otherwise: but even the predominant passions seem here to require a certain sort of indulgence, when we take servitude, ill-usage, oppression, and a want of education into the account. The following statement, however, is, alas! but too true.

Both Esthonians and Lettonians, though not without numerous exceptions, are apt to indulge in inflammatory liquors. Without beer and brandy no pleasure. Intemperance is a prevailing vice, whatever indigence and misery it may cost them. Old and young, husband and wife, are seen carousing in their families, and drunk in the krougs; only girls and some young women are exempt from this charge: the aged drink hard, and continually smoke tobacco. Neither remonstrances nor woful experience can moderate this propensity; they only sleep away the fumes of liquor in order to intoxicate

themselves afresh ; even sucklings must taste of the glass as often as the mother drinks.

A considerable part of their pleasure consists in singing and music. The former seems peculiar to the females ; at weddings they have even professed singers brought for the purpose ; yet the men join in the tune as soon as the bottle has excited them to merriment. At their work in the field, at their play, the girls are always singing. Some have good voices and great natural talents ; but the Esthonians more than the Lettonians. The former sing only in one key, but commonly in two parts ; so that every line sung by one band is repeated by the other. They have a great variety of ballads and tunes. In several of their nuptial songs they annex to every line the two words, Kaffike, Kanike ; which perhaps at present are void of meaning, though formerly they may have been expressions of tenderness. The Lettonians lengthen out the last syllable to a great extent, and sing commonly in duets, one of them grunting out a sort of bass. The most usual and probably a very antient musical instrument with both nations is the bag-pipes, which they themselves make, and sound in proper time, in two keys, with great dexterity. M. Arndt has endeavoured to explain the esthonian name of this instrument,

torropil,

torropil, though perhaps with not! very great success. Every kroug, where guests are invited by the sound of this charming instrument, is sure to be much frequented, especially on holidays. The miserable horizontal harp, and the fiddle, which the Lettes are extremely fond of at all their festivals, were first introduced among them by the Germans.

In their dances the couples consist of old and young, frequently man with man, and woman with woman; one couple following quite close at the heels of the other, so as to allow of but few variations. The Esthonians keep always a $\frac{3}{4}$ or a $\frac{3}{8}$ time, make short sliding steps, and at the third stamp rather harder on the ground. The lettonian dance is somewhat different, and more like an artless Polonoise; they have also a species of country-dances.

As the Russians, so the Esthonians and Lettonians, especially the younger sort, place the swing among their favourite summer-pastimes. At almost every village, and at every kroug, stands this machine, on which one or two couple divert themselves at a time; which diversion is in high vogue at Easter.

The exercise of swimming, so much recommended by Rousseau, is here the general amusement in hot weather; all ages and sexes take to

the water like so many amphibious animals : but it costs many of them their lives, chiefly by going in when drunk.

All the boors, without exception, are passionately fond of scalding-hot baths, where they once at least in every week cleanse their bodies ; a practice in many respects of great service to them, from their hard and dirty manner of living. In the midst of the most profuse perspiration, with the sweat streaming down their limbs, they go out and sit to cool themselves in the most intense cold, rubbing their bodies with snow, without feeling any bad consequences from it. While in the act of bathing, they ejaculate all sorts of pious wishes, such as, 'God cleanse me from all my sins, as I am now cleansing my sinful body, &c. ; then thank themselves for the good washing, for the heating of the bath, and for the fetching of the water.

Infidelity towards their masters, distrust, a disposition to cheat and to steal, frequent elopements, and the like, are their ordinary vices, and certainly take their rise from the slavery in which they are held. They rarely rob one another ; if any one is known to do so, he is held in abhorrence by his brethren ; but so much the more ingenious are they in devising means to impose upon their masters ; and in general all
Germans.

Germans. The bolts, hasps, latches, rings, hinges, and matters of this nature, are all stole from the yards and outhouses of the manor-house; let them be renewed as often as they may, ten overseers would not be able to prevent it. The casks of brandy which they convey to town, they have the art of tapping cunningly under the hoops, without touching the seal with which they are thought to be secured, and of introducing water to make good the deficiency. But, as they always carry a sealed specimen of the strength of the brandy, they would presently be betrayed, if they did not know how to evaporate a part of the vinous spirit by the dexterous application of heat and cold. They make the corn-sacks pay toll in like manner, and then throw water upon them, or contrive to make a hole in the bottoms or sides so as to have all the appearance of being fretted in the carriage. They seldom sell their hops, but the buyer finds to his cost that they have been adulterated by a mixture of bad wild hops, sand, &c.

They have frequently risen in rebellion against their masters. In the year 1345 they rose in Harrien, and in 1560 in the Vieik; the same thing has happened in later times. Some years ago great numbers of them assembled, with the most blood-thirsty intentions, under a

leader, who taught them from the scriptures that all slavery was abolished by the law of the gospel; and, seduced by false rumours, artfully spread among them, a number of Lettonians were very lately incited to commit great outrages. Some have been even known to wish for hostile invasions of their country, in order that they might mingle with the enemy and satisfy their vengeance. At times a lord or a steward is cruelly murdered. Examples are not wanting of their having carried complaints against their masters, even to the supreme tribunals; and of their having brought them to legal punishment. Yet the generality of them are devoted with the sincerest esteem and affection to their kind and humane masters, and are enemies to all resistance. In their revenge, even among themselves, they know no bounds; committing a murder with the greatest coolness and indifference, which they otherwise hold to be the most heinous of crimes.

Lying, cursing, and swearing are very current among them, endeavouring to make the most manifest falsehood pass for truth, by such dreadful imprecations, as, Let me perish! May I be struck blind! May God shower his judgments on my fields and cattle! which are as common a phraseology with them as with the Greeks; and

and in similar terms they express their aversion towards others. At the same time they appear to have a great reverence for judicial oaths; relating numerous instances of the visible judgments that follow perjury. How much ought their superiors to encourage and cherish these sentiments for enforcing a strict adherence to truth! Whenever a lord attempts to persuade or to bribe his boors to give a false oath, nothing is afterwards sacred to them; even his person as well as his property are thenceforward in danger.

It will be necessary now to say somewhat of their religion. Even in Livonia it has undergone some alterations. The antient inhabitants of these countries were heathens; several superstitious customs, not yet entirely eradicated, and some monuments still remaining are relicts of their antient worship. Of their superstitions but little need be said; the subject would neither improve nor entertain us. One instance may suffice. Even the better educated boor cannot, without much pains and inward conflicts, suffer any spinning to be done in his house on Thursdays for fear lest the sheep should not thrive, or should die of the rot: though, on being told that, when they have been obliged to spin on that day at the lordship, no harm has happened

happened there to the sheep, they are ready enough to acknowledge that it is an idle notion. Some pretend that this foolish observance of Thursday took its rise from the nonsense of one of their brethren, who, in the year 1563, taught them to hallow that day, because God, on account of some assistance he had received ~~on~~ Thursday, enjoined it to be observed instead of Sunday. The truth of the story must be admitted on the testimony of the historian Kelch : but it gives no sufficient reason for the particular abhorrence of spinning, as they do every other kind of work on that day. The custom seems rather to have been kept up as a relic of paganism, and the more so, as the above-mentioned uncommissioned preacher found no very general acceptance with his brethren. Neither is the story any proof of the peculiar stupidity of this people. More enlightened nations have adopted as articles of faith doctrines to the full as incomprehensible.

Kelch and others mention some of their deities by name ; but we should cautiously examine their accounts before we give credit to them. The first converters of the Livonians were but little acquainted with the language of the people. They thought themselves justified in describing their pagan worship from its most odious side, and
even

even with pious exaggerations ; in order to give a pretext to the force that was used in these conversions, and to exalt their own merits, they hesitated at nothing. They charged the unconverted with all kinds of abominations, and particularly with polytheism : however, it has never been thoroughly proved. The Yummal of the Esthonians, under which name they still, in common with the Finns, the Laplanders, &c. worship the true God, might be known by more than one appellation, as we may well believe if we but bring our reflections a little homeward ; or what is related of their other deities, as Thor, &c. was perhaps no more than various kinds of homage they thought due to inferior deities, or to the memory of heroes that had arisen among them. The livonian paganism is affirmed to be perfectly similar with that of the Celts and the antient Germans. Of these it is well known that they had no temples, but even destroyed them wherever they were found, because they esteemed the great ruling spirit of heaven and earth, whom they held to be one only God though they adored him under various names, too great and too exalted to dwell within walls, and to be inclosed in human structures. Their religious rites they performed in the open fields, on the top of a mountain, by the side of a spring,

spring, or under the shade of a tree : such places were sacred. They believed in inferior deities, to whose government and care certain regions were allotted ; they scrupulously avoided to offend, especially in the sacred places, these subordinate divinities, whom they imagined to delight chiefly in fire and water, as two beneficent elements, and therefore they threw into them bread, wax, and other offerings, as tokens of their veneration. In their groves they nourished a sacred fire. To speak of the marriage and the birth of gods, they held to be indecent, and consequently were unacquainted with female deities. They had a god, Thor, to whose influence they attributed all ærial phænomena. Statues they had properly none ; nevertheless some are found among them which they probably borrowed from foreigners and their religion. — Of facts so notorious from the histories both of the Celts and the Germans, no man will expect particular proofs. Let us then return to the Lieflanders, amongst whom we find all these religious observances, even to the minutest article ; and the same celtic and german god Thor adored as a patron in military exploits. It may reasonably be affirmed, that the Lieflanders, as in the whole of their religion, so chiefly in its first principle, the unity of God (which they held from mere tradition,

tradition, without any more immediate revelation, though M. Jerusalem, Dr. Leland, and others, absolutely deny it to be held by any heathen nation) had a perfect resemblance with the Celts and Germans: that all their supposed plurality of gods were but several names for the only Potentate, or were subordinate deities invested with amiable or formidable qualities, and held up to the admiration or the terror of mankind, or in order to preserve the remembrance of eminently beneficent persons; hence perhaps we may derive the origin of the tales invented by a holy zeal concerning their female deities. Among the Esthonians we can find no intimations built on sure grounds of the latter sort, and in general but few names of deities. With the Lettes they are more numerous, but that they denoted so many really distinct superior beings, it would be no easy task to prove. What I have been able to collect with any certainty concerning their nature, offices, rites, and representations, I shall here subjoin.

Mahjaskungs and Zeemniks seem to have been a kind of penates or household gods; the latter particularly presided over vassals and cattle, for which reason they sacrificed in both kinds to him in autumn. Lulkis, likewise a kind of spiritus familiaris. Meehra Deeus, or Mesha Deeus, the

the god of wild beasts, particularly wolves. Pūshkeis, the god of forests. Pilnihts, the god of plenty. Auskuhts, the god of health and sickness, chiefly worshipped by the Lithuanians. Veitzgants *, the patron of betrothed persons, particularly the bride. Gahrdehdis, the fisherman's god. They also reckon up a few goddesses: Deevekla, generally called, by way of eminence, the goddess, contractedly Dehkla; who, it seems, was the tutelary deity of women in child-birth, by whose benign influences the new-born babes were lulled asleep and made to thrive. Others ascribe these effects to a Tikkla or Tiklis, while to Dehkla †, they consigned the care of the children at the breast. Laima was the goddess that presided over pregnant women; and Mahte was in general the childrens' goddess, known under several epithets; among others Peena Mahte, for whom they kept the domestic snakes, which they carefully fed with milk; and even to this day, in some houses, especially among the vulgar, the superstition is still retained of dreading to drive the house-snakes out of doors.

Of the places and groves where the antient Lieflanders, as well Esthonians as Lettonians,

* From gan veitzaks, it succeeds well.

† From the lettish word deht, to suck.

were wont to perform the holy rites of paganism, many, notwithstanding the strict orders that have been issued for their demolition, are still in being, towards which they constantly testify an awful reverence. None choose to approach them, nor ever venture to cut a bough from a sacred tree, or even to pluck a strawberry that grows beneath its shade. If a German, out of wantonness or zeal, does an injury to these trees by cutting or breaking them, they shudder with the certain expectation of some impending judgment. Some of these sacred places are distinguishable by one, others by several (mostly oak) trees; on hills, in plains, or near a spring. Boors that are not deterred by the fear of discovery, and the penalties annexed to it, wish to be privately buried in these places; some of which perhaps originally owed their consequence, not merely to religious rites performed there, but on account of some league or treaty concluded at them; and afterwards, by an easy transition among unlettered people, were considered as sacred and inviolable. Rousseau has somewhere judiciously observed from antient history, that it was customary not only to take the gods to witness the covenant, but to make choice of certain stones, hills, and trees as memorials of the transaction. Instances of this

custom are to be met with in the books of Moses and the chronicles of the Jews. The sentiment that the inferior deity, who delights to dwell in this spot, will revenge the violation of a monument marked out for calling to the minds of men the engagements they have mutually entered into in the presence of their god, is of wonderful efficacy with rude and uncivilized people. Superstitiously to visit and revere all such hallowed groves is strictly forbidden: but faith suffers no restraint; and inveterate prejudice triumphs over reason. Several barons have commanded their boors to go and cut down such trees; but neither threats nor persuasions would prevail till they inspired the awe-struck vassals with courage, by taking the axe into their own hands.

Offerings of wool, wax, yarn, bread, &c. are still in use among them, by laying them on the holy places, or cramming them in the hollows of the aged trees. Springs and rivers likewise have their share of these unbloody sacrifices. But, especially when any sudden eruption or ulcer appears on their body, they say, it comes from such a place, or properly from the earth; they therefore go to the place where they have laid down, or slept, or drank, and according to their opinion, got the harm: there they scrape
some

some particles of silver from a ruble, or from the neck or breast ornaments of their wives ; and then, as nature commonly soon relieves herself, they take him to be a very silly man who should doubt of the efficacy of the silver-scrapings. This may be considered as a propitiatory offering to the deity of the place. At their secret idolatrous assemblies, the keeping up of the fire, into which they throw all sorts of offerings, is still a principal observance.

If it be true that the Celts paid no regard to statues and idols as necessary appurtenances of their worship, yet they were not altogether unacquainted with them ; whether they borrowed them from other nations, or adopted them in some places as the inventions of ingenious persons. In Liefland too they had idols, though perhaps in no great number. Kelch describes one that they worshipped under the figure of a crowned man ; which must have been of a pretty large size, as they used to deposit their offerings in a bowl fixed on his lap. In the library belonging to the Olai church at Reval, among other curiosities, is still preserved a liefland idol of the heathenish times, and is about four inches in height. As there were then no eminent artists in Liefland, the form given to this figure but poorly expresses that of a man : perhaps they were made merely in memory of their heroes.

We likewise find some few altars still remaining ; probably a sort of table for offerings : however I shall not presume to state their peculiar destination. One is yet standing in the Oberpaschen, near the lordship of Kavershof, under the branches of a sacred tree, in the hollow of which little offerings are still frequently found. This altar, artlessly hewn out of a large block of granite, is about two ells in height, somewhat of the same in length, but scarcely one ell broad ; smooth at top, of nearly an oval form, surrounded by a frame rising two inches above the foot. The foot, all of one piece with the flat of the table, is pointed downwards that it may stick fast in the earth : that it is a reliet of paganism, is confirmed both by common report and the evidence arising from the thing itself. After the reformation no field-altars were erected ; in the times of popery they would have had a better shape, and would certainly not have been placed under a suspected tree ; in general the whole form of it contradicts the supposition that it was made after the introduction of christianity. For domestic uses it could not have been designed, as many boors even at this day have no table at all in their houses, much less one of stone. — That their sacred trees and groves renew themselves by the casual falling of their own seeds, or by secret plantation, scarcely needs be mentioned.

Proper

Proper idol-temples indeed have not been found in Liefland ; yet, in regard to an antient wall still standing I have some doubts. It stands near the Vastemois, but in the precincts of Fellin-castle, on a little elevation in a forest much grubbed up. The wall is quadrangular, two ells thick, four fathoms long, and three fathoms broad. On each side are seen three small windows ; but none above the gate opposite. It is not exactly known whether they were formerly covered ; nevertheless the boors unanimously relate, that in antient times, when the Fellin road ran that way, a traveller chanced to lose himself in this forest, then very thick with trees, and in the anxiety of his mind here vowed to build a chapel, which he did accordingly, and bestowed upon it the name of Risti Kirrik, that is, the Cross-church. — If we give faith to this story, the builder must have been a christian. — At present this dilapidated structure is put to a very singular use. Every year, nine days before the feast of St. George, or, as they call him, St. Yurgen, in the night, great multitudes of boors, of both sexes, and of all ages, from all the adjacent parts, assemble here, sometimes to the amount of several thousands, kindle a fire within the inclosure of the wall, into which they throw offerings of various kinds, such as yarn, flax,

L L 2

wool,

wool, bread, money, &c. ; at the same time depositing all manner of waxen figures in the little apertures that seem to have served for windows. Round the fire sits a circle of beggars, who have the care of keeping it up ; and for their trouble partake in the offerings. Of all the sights in the world, this is surely the most ludicrous. All the barren women of the country round, dancing stark naked about these old walls ; others eating and drinking with noisy festivity ; many more running in frisky gambols about the wood, and followed by young men, playing all sorts of tricks, and talking all manner of ribaldry. Hitherto it has not been possible to put down this strange licentious meeting ; in the mean time all the circumstances of it seem to shew that it is derived from the days of paganism. The offerings, the fire, the dancing, the licentiousness, are manifest proofs of it : but then have we the remains of a heathen temple in Liefland ? Without pretending to decide this question, I find it not probable, that a people, known to be remarkably tenacious of their old institutions, should in modern times make choice of a place to meet in for their interdicted worship, which their fathers had not employed to a like purpose. What should move them to it ; since they would be better concealed, and be less liable to detection,

tion, in the far deeper forests at no great distance. The preservation of the wall, through so many ages to the present times, may be owing to reparations carried on by stealth ; the story about the occasion of building it, and the reason for its name may be all a fiction, in order to save the place from the destruction with which it was threatened by the christians. The Celts and Germans had no temples ; neither had the antient Prussians any : but simply from a quadrangular wall, we can draw no inference of a temple. We are told by a learned antiquarian *, that the Prussians had the sacred forests, where they worshipped their deities with fire and sacrifices, surrounded with curtains or screens. The Lieflanders may likewise have had screens or fences for a similar purpose ; Kelch speaks of hedges, which they set up in the forest around their idol. This was necessary at least for keeping off the cattle that roamed at large. For the sake of solidity and permanency they may easily be supposed to have changed the hedge for a wall, as is often done by the rude inhabitants of other countries as well as of Liefland ; but long before the arrival of the Germans, here was a sort of towns and permanent houses, and in all proba-

* Dr. Arnold, in his compendium of the ecclesiastical history of Prussia, book i.

bility even russian churches ; and if this were not the case, yet this we know, that the Danes built monasteries in the eleventh century on the coasts of Esthland. — Accordingly, we find inclosures, even walls, serving them instead of temples, without bearing that name, because it is likely they were uncovered at top. This is delivered merely as an hypothesis, which others, more deeply versed in antiquities may think worth examining. To conclude, if the wall was actually built for a christian chapel, yet the Esthes found it not unsuitable for the performance of their heathenish devotions. Mr. Becker, in his little tract under the title of *Livonia in sacris suis considerata*, positively says: *interea in lucis five sylvis istis neque templa, neque aræ, nec columnæ, nec idola fuerunt inventa* ; which is certainly advancing much more than he has authority for,

Not from the first pages of antient history, which are for ever veiled in obscurity, nor yet from unwarrantable surmises ; but, judging by antient usages still remaining, we perceive a great resemblance between the old religious rites of the Celts and the Lieflanders, why should it not be thought highly probable that the Liefs and Esthes by their Yummal, and the Lettes by their Deeus, designed the sole true God ; in subordi-
nation

nation to whom they only admitted inferior deities as beneficent or malicious spirits. Perhaps it might be for this reason that the doctrine of the devil met with such good reception, and is still preserved with so much reverence among them, inasmuch that they generally tremble at the mere recital of his mischievous doings; imputing to him all the evil that happens in the world. Doubtless it is because they think him like the dreadful deities they formerly imagined.

Among the Lettes and Esthes also many remains of heathenism are still observable; so that it should seem as if the reformation together with all the learned opinions so scrupulously maintained by the bishops, have not as yet been able to eradicate them. Their ignorance, then, which we must therefore believe partly invincible, with its attendant an unusual sensuality, cherish their propensity to purchase by sacrifices and offerings a happy progress in their undertakings. In general, the benign influence of religion on their conduct is not perceptible by the most attentive observer.

In the twelfth century the Liefes and afterwards the Lettes, were brought to the profession of christianity by the Germans; but a part of the Esthes by the Danes. Perhaps they already

knew it by name, through the Russians who dwelt in the country. The Germans gradually introduced baptism over the whole of the islands as well as the firm land. The new religion got an outward splendor from the teutonic order; the institution of bishops, the foundation of monasteries, and the appointment of priests; all was purely catholic. Nevertheless the Russians have at all times had churches in Liefland; therefore in all the treaties entered into with the sovereigns of Russia, it is always an article that the russian churches shall be kept clean and in good repair, and in all respects according to antient usage.

In the year 1522, the reformation forced its way into Liefland, by a preacher, who, on being driven out of Pomerania, had fled to Riga, named Andreas Knœpken, or Knopf. It quickly spread itself far and wide, and was even favoured by the order. All followed Luther's doctrine; and the popish ritual, afterwards patronised on the part of Poland, had, on the whole, no influence to its detriment. During the sovereignty of Sweden over these regions, a law was enacted, that whoever deviated from the doctrine contained in the symbolical books, should be incapable of inheriting any lands or dues for ever.

Every

Every other religious practice was prohibited, and even to be present at it, under a penalty of 100 dollars silver money.

By the 10th article of the treaty of Nyſtadt, the greek religion is ſecured in the free exerciſe of its rites. In Riga there is a church for the uſe of the Calviniſts; the catholics have not as yet built themſelves a proper church, but perform their worſhip in a houſe fitted up for that purpoſe. In Lieſland it may be juſtly ſaid, that every man may follow his own perſuaſion in matters of religion without the leaſt moleſtation.

In Lieſland count Zinzendorf found alſo many friends to his church-inſtitution. Its rapid progreſs, indeed, attracted the notice of government. Two of their followers, Eberhard Gutſef, ſuperintendant of Oeſel, and another, a preacher of that place, on account of certain charges laid againſt them, were brought to St. Petersburg in 1747, with two other brethren, where the firſt died in priſon of ſickneſs in 1749, and the other was ſet at liberty in 1762. Since that event nothing has ever been attempted againſt the members of that fraternity.

Having already extended this ſection beyond what the limits I propoſed to myſelf will properly allow, I am obliged to omit ſeveral particulars, and to reſerve others for the part where I ſhall treat of this country as a province. I ſhall therefore

fore conclude for the present with somewhat concerning their language.

Mr. Hupel, to whose laborious researches the world is under great obligations, gives the following extract of a letter from M. Pritzbuer, provost of Marienburg : “ A provost of Mecklenburg, of the name of Frank, has written an account of Mecklenburg. In the fifth century of his history I find the lettish paternoster in Mecklenburg. Making allowance for the later improvements of the language, the imperfect knowledge of it in the first promulgators of christianity, the mistakes from frequent transcribing or printing, the still usual drawling out or expanding of the words, and the changing of some vowels, as a into o, also o into oa, and ee into i, as is customary in these parts, I conceive the matter to be very clear. I will therefore subjoin it as it comes to me, together with the corresponding words as they are now in use :

1. The old vendish : Tabes mus, kas tu es
2. The present words : Tehvs muhsu, kas tu effi
 Father our, who thou art

1. eefhan debbes ; sis fvetitz tows varetz ;
2. cekhan debbesim ; .effus fvetitihtz taws vahrds ;
 in heaven ; be hallowed thy name ;

1. enach mums tows valftibs ; tows proatz bus ka
2. cenhk mums taws valftiba ; taws prahtz buhs kà
 come to us thy kingdom ; thy will be as

1. eekshan debbes ta wurfam femmes ; masse demishe
 2. eekshan debbesim tà wirfu femmes ; muhsu deenishku
 in heaven so on earth ; our daily

1. mayse dus mums shoden ; pammate mums musse
 2. maifi dohdi mums shodeen ; pametti mums muhsu
 bread give us to-day ; remit us our

1. grakhe, ka mes pammatt musse paradacken ;
 2. grehkus, kà mehs pamettam muhsu paradneckem ;
 sins, as we remit our debtors ;

1. ne wedde mums louna badeke ; pet passartza
 2. ne weddi muhs launa kahrদিনাশানা ; bet passargi
 not lead us in evil temptation ; but deliver

1. mums nu wusse loune.
 2. muhs no wiffa launa.
 us from all evil.

The Livish language is indeed still in being ; but, as it is confined solely to the boors in Salis, a tract not more than seven english miles in length on the coast of the Baltic, and they so mixed with the Lettes, that they might rather be called Lettes than Liefs, is in danger of becoming, in no long space of time altogether extinct, it may not be totally useless to preserve such words and phrases as Mr. von Essen, superior pastor at Riga was able to gather up amongst them.

God, *Tummal*
 Heaven, *tauge*
 The sun, *pehva*
 The moon, *kub*

A star, *tehd*
 A cloud, *pillud*
 Rain, *vihme*
 Rainbow, *vickerkabr*

The

The earth, <i>mab</i>	Sheep, <i>lammase</i>
Sand, <i>yuge</i>	Lamb, <i>lammobni</i>
Man, <i>imie</i>	Boar, <i>orkas</i>
The foul, <i>yenge</i>	Swine, <i>sbicka</i>
The body, <i>lee</i>	Pig, <i>porrase</i>
The head, <i>peh</i>	Goose, <i>kohs</i>
The hand, <i>kehse</i>	Duck, <i>publ</i>
The foot, <i>yalge</i>	Cock, <i>kicka</i>
Flesh, <i>offa</i>	Hen, <i>kanna</i>
Bones, <i>lub</i>	Fish, <i>kallad</i>
A garment, <i>vanise</i>	Net, <i>virge</i>
A pelice, <i>kan/ska</i>	Boat, <i>laia</i>
Troufers, <i>vsadde</i>	Sea, <i>merr</i>
Stockings, <i>tucka</i>	River, <i>yogg</i>
Boots, <i>sapkad</i>	Bridge, <i>shilde</i>
Shoes, <i>kenge</i>	Mountain, <i>paald</i>
The town, <i>nine</i>	Stone, <i>kibv</i>
The village, <i>kiulla</i>	Bread, <i>lebe</i>
The house, <i>ohng</i>	Salt, <i>fale</i>
The church, <i>pækodda</i>	Butter, <i>vuit</i>
The preacher, <i>pæp</i>	Milk, <i>sehnde</i>
Husband, <i>mehs</i>	Rye, <i>rugid</i>
Wife, <i>neine</i>	Barley, <i>odred</i>
Child, <i>lapse</i>	Oats, <i>kabrd</i>
Father, <i>issa</i>	Whcat, <i>nissud</i>
Mother, <i>yemmad</i>	Peas, <i>yehrnde</i>
Son, <i>pohge</i>	Beans, <i>pubbad</i>
Daughter, <i>tubta</i>	Turnips, <i>naggrad</i>
Horse, <i>ubbi</i>	Flax, <i>linnad</i>
Mare, <i>keerve</i>	Hemp, <i>kanne</i>
Foal, <i>vahrse</i>	Garden, <i>tarra</i>
Ox, <i>ehрге</i>	Apple, <i>ummare</i>
Cow, <i>neema</i>	Table, <i>lobde</i>
Calf, <i>vaiskaa</i>	Stool, <i>krefle</i>
Ram, <i>ohnis</i>	Bench, <i>penke</i>

Candle,

Candle, *kuhndel*
 Candlestick, *luckter*
 The door, *uck*
 The window, *leep*
 To hope, *lodhub*
 To hear, *kulupp*
 To see, *neeb*
 To taste, *shmeckeab*
 To smell, *aistab*
 To feel, *muistkab*
 To go, *leeb*
 To pass, *brauzma*
 To ride, *ratzt*
 To sow, *kuillab*
 To sit, *istob*
 To stand, *rurtub*
 To call, *rutz*
 To obey, *kuhl*
 To love, *milub*
 To hate, *nidub*
 To tell, *utlub*
 To speak, *pagateb*
 To think, *mutlub*

To ask, *kiussub*
 Good morning, *yo omaga*
 Good day, *yo paeva*
 Good evening, *yo iddug*
 What are you doing? *mis tes
yutiet?*
 Are you in health? *kas tei
terud obdi?*
 Let us go, *ubrgemi leed*
 Come with me, *tulgid min
imis*
 Stay here, *yeeed ten*
 Farewell, *illagid terronis*
 Good night, *maggo terronis*
 To keep a wedding, *kafen
pidlahym*
 To curse, *vannup*
 The devil fetch thee, *votha
teid kurre*
 May thunder kill thee, *putki
lus tei robg*
 That is certainly true, *se om
tohdst en toihs*

INDICATIVE MOOD.

Present. { S. Minna om, I am.
 Sinna om, thou art.
 Temma om, he is.

Pl. Mee omme, we are.
 Tee oti, ye are.
 Nemmat, or need toist,
 they are.

Imperf. { S. Minna oll, I was.
 Sinna oll, thou wast.
 Temma oll, he was.

Pl. Mee olme, we were.
 • Tee olte, ye were.
 Nemmat, or need olte,
 they were.

Perfect
 Plusquamperf. } carent.

Future.

Future.	S. Minna lime, I shall or will be.	Pl. Mee lime, we shall or will be.
	Sinna lime, thou shalt or wilt be.	Tee lime, ye shall or will be.
	Temma lime, he shall or will be.	Nemmat, <i>or</i> need lime, they shall or will be.

CONJUNCTIVE MOOD.

Pluquamperf.	S. Minna olgſka, I ſh ^d have been.	Pl. Mee olgſka, we ſhould have been.
	Sinna olgſka, thou ſhouldeſt have been.	Tee olgſka, ye ſhould have been.
	Temma olgſka, he ſhould have been.	Nemmat, <i>or</i> need olgſka, they ſhould have been.

All the other tenſes are wanting.

IMPERATIVE : Oth, be thou. Othe toi, be ye.

INFINITIVE : Olde, to be.

I have before me a collection made by the paſtor of another pariſh ; but, as the reader will probably think the foregoing ſpecimen quite ſufficient, I ſhall here conclude this article.

The LIVONIANS are, by ſome inquirers into hiſtory, claſſed as a peculiar nation of Finns, while by others they are comprehended among the Eſthonians *. The annaliſts Neſtor and Henry

* Schlætzer takes them to be the remains of the primitive inhabitants of Livonia, or a branch of the Finns ; but in this caſe it muſt be preſuppoſed that the finniſh nations were once in poſſeſſion of Lettland and Courland, and were driven out by the Lettes, when only this ſmall body of Livonians remained in the country. — Friebe, (in his hiſtory of Livonia, Eſthonia, and Courland,) from their language and way
of

Henry the Lette distinguish them as a separate nation, and both agree in testifying, that in the very earliest periods they were among the tributary tribes to the russian empire. At present they are only in small remnants in two different places: in Courland on Angers-strand, making a tract of 90 miles, where they consist of about 150 families, and in detached parts of the Riga-government. As divine service is now performed among the remains of this people in the lettish language, their own is gradually going out; and, perhaps by the end of the next century not a trace of the Livonians will be seen.

5. One of the most remarkable nations in the Finnish history are the PERMIANS; or, as they are called in the icelandic Reports, Biarmians, who are denominated by the Russians Permiaki, and whose present homesteads are in the governments of Perme and Viætka, and in the northern districts of the river Oby. It should seem that the scandinavian navigators in the middle ages gave the name of Biarmia to the whole country between the White-sea and the Ural. The Permians on the Dvina were discovered in the ninth

of living judges them to be real Esthonians, who have kept themselves unmixed among the Lettes; which may easily have happened from the hatred entertained by the two nations against each other. Their dialect is purely esthonian with some small mixture of lettish.

century

century by Other of Halgoland, a province at the extremity of Norway, and afterwards entered into the service of Ælfred the great, who drew up an account of this voyage in the anglo-saxon language. The icelandic reports are likewise full of these people.

According to these Reports the Permians on the White-sea and the parts about the Dvina were the most wealthy, the most powerful, and most remarkable of all the northern Finns. Here the carved image of the god Yummala had its far-famed temple *, the description of the magnificence whereof borders on the marvellous, and has been evidently drawn up by a rude but warm imagination. According to these descriptions the temple was very artfully built of costly wood, and so richly ornamented with gold and precious stones, that it threw a radiance round the whole circumjacent country. The image of the god had on a golden crown set with twelve precious stones; a necklace, which in value amounted to 300 marks in gold, and a dress which outweighed the lading of three of the richest ships that navigated the grecian sea. Lastly, the figure bore on its knees a golden chalice of such capacity, that four men might quench their thirst from its contents, and this

* Yummala is the universal deity of the Finns, as Perun was of the Slavonians and Lettes, and Othin or Odin of the Germans.

vessel was filled with the same valuable metal of which its mass consisted. → The report of these extraordinary riches it was that tempted the northern freebooters to make armed expeditions to these distant parts and to quarrel with the natives; it was considered too as an honourable achievement and an heroic adventure to have brought off some spoil from this temple. From Halgoland expeditions were made thither every year; even several norwegian kings went on predatory excursions to Permian, and usually returned with rich booty. We also find that scandinavian mariners visited this country for the purposes of trade alone, and without any piratical views.

Supposing these fabulous descriptions of the magnificence of Yummala's temple, and the great wealth of the country to be not entirely destitute of all foundation, as we may with great probability, it then merits inquiry in what manner the permian Finns accumulated so much gold, and how their country became the mart of a great and lucrative commerce. In very remote ages the Permians were already famous for their trade with the Persians and Indians. These nations brought their commodities over the Caspian, up the Volga and the Kama, to Tscherdyn, a trading town of antient date on the river Kolva; and the Permians transported these goods, as well as

their own products, along the Petschora to the Frozen-ocean, where they bartered them with the people of those parts against furs for their oriental trade. — The ruins of antient towns still bear witness to the flourishing condition and the civilization of this people.

By the historical traces still subsisting, we perceive then that the Permians were the only race of the Finns who were a polished and commercial people and known to other nations, while the rest of their kindred tribes lay dormant in the deepest barbarism. — The Reports likewise speak of kings and a sort of political constitution in Biarmeland. Many of these kings, if indeed their existence were historically ascertained, seem to have been, not natives, but Scandinavian corsairs, as their names also intimate. These at various times subdued as well the Finns as the Permians, and afterwards remained in these countries.

With the year 1217, the expeditions of the Norwegians to Permia cease*; at an earlier

* Nearly about the same time, though somewhat earlier, the first incursions of the Mongoles or Tartars into Russia happened. That this circumstance occasioned the Scandinavian pirates to abandon their predatory expeditions to Permia is by no means probable; for, besides that a later event can never be the cause of an earlier, the depredations of the Mongoles were principally confined to the southern parts of Russia, and it is no where to be seen that they penetrated even to Novgorod, much less so far as Permia.

period, however, and probably in the eleventh and twelfth centuries, the republic of Novgorod made itself master of this country, sending thither russian colonies to keep the inhabitants in subjection. About the year 1372 the christian faith was propagated in Permia by bishop Stephen. At the close of this, or the opening of the following century, a dispute arose about the possession of this country between the city of Novgorod and the grand-duke Vassilly Dmitrievitch, which at length was terminated by a compromise, in which it was agreed that the Novgorodians should renounce all claim to it. The Permians now maintained for a length of time the liberty of chusing their rulers from their own body. Tzar Ivan, in 1543, gave them the first viceroy, to whom the chief of the inhabitants were to act in a subordinate capacity in the affairs of government, and who had his seat first at Kolmogor, and afterwards at Archangel. — At present the whole of antient Biarmia, the borders whereof cannot now be accurately defined, is divided into several governments; and the descendants of the Permians, heretofore so famous, numerous, and powerful, are dwindled away to an insignificant remainder, who, amidst thorough Russians, have lost almost all their

national characteristics, even to their very language.

6. Near and among the Permiaki dwell the SYRIÆNES, in the district of Ustyug-veliko, in the governments of Vologda, of Perme, and Tobolsk. These people call themselves, as well as the Permians, Komi or Komi-Murt. Their language, which they have still preserved, much resembles the permian, and is nearly related to that of the Finns; in religion, mode of life, and manners, they have approached so near to the Russians, that they are scarcely any longer distinguishable. In the fourteenth century, they, together with the Permians, were brought to the christian faith.

7. The VOGULES inhabit the western and still in a greater degree the eastern part of the northern Ural, and nomadise chiefly about the rivers which unite with the Irtysh and the Oby to the Frozen-ocean, or with the Kama and the Volga into the Caspian, therefore principally in the governments of Perme and Tobolsk: they call themselves Voguli *, and are denominated by the Russians Vogulitschi. According to their traditions, their home has always been where

* According to M. Georgi they denominate themselves Manfi.

they reside at present: they came under the russian sovereignty previous to the conquest of Siberia, at which time they were so brave and warlike a nation as to give the Russians some difficulty in reducing them to their obedience. For some time they were thought by the latter to be the same people with the Ostiaks; documents however are in being, upwards of three hundred years old, in which they are specified as a distinct nation *. All the stems of the Vogules, dispersed in various districts, taken collectively, compose a numerous nation; but accurate statements of their population are not to be had. The Vogules nomadising in the circle of Tscherdyn, in the government of Perme, amounted in the year 1783 to no more than 111 persons, composing nine families, and so nearly related

* In the Steppennaia knigi, for example, we find the following passage: " In the year 7007 (1), the grand-duke
 " Ivan Vassillievitch sent his troops into the Ugorian
 " country against the Gogulitshes; and they went and
 " took their towns and their country, overcame their
 " princes, made them prisoners, and brought them to
 " Moskva. The rest of the Ugres (2), and Gogutit-
 " shes (3) they slew, &c.

(1) 1498.

(2) Yugrians, whence the Ural and the Yugrian mountains have their name.

(3) Vogulitshes.

in consanguinity, that they were obliged to fetch women for their wives from other races.

8. The VOTIAKS or Votes, upon the river Viætka, in the governments of Viætka and Ufa, call themselves Ud or Udi (which seem to be the same with the russian *Voti*), also *Mord*, i. e. *Man*, or *Udmord*. Living but little intermixed with other people, their language continues to be a pure Finnish dialect. God is with them *Yumar*, and with the Finns *Yummala*. They have still retained their old distribution into stems, and give their villages additional names accordingly; their noble families are however partly extinct and partly mingled with the populace. They were formerly under tartar protection; but on changing their old masters for the russian sovereignty, they also quitted their pastoral life for the occupations of settled husbandry, and turned their tents into permanent houses. — Their number is not inconsiderable; in the government of Ufa there are about 15,000, and in that of Viætka 30,000 males.

9. The TSCHEREMISSES dwell in the governments of Viætka, Kazan, Simbirk, and Ufa, on both shores of the Volga, especially the left. They call themselves *Mari*, i. e. *Men*. Although their language be mixed with tartarian and russian words, it is easily distinguishable as a Finnish

nish dialect. The Supreme Being they call Yuma. — At the time of the Tartars they were subject to them, and dwelt more southerly between the Volga and the Don; at the downfall of the tartarian dominion they fell to the russian empire, and even in this state they long retained their own khans, which, however, ceased upon the extinction of the princely race. They were formerly a pastoral people; but, under the russian government, they are gradually become husbandmen. The present amount of them is not known; they have, however, been estimated at 20,000.

10. The Tschuvashes, who also denote themselves by that appellation, are a very numerous nation, paying the tax for more than 200,000 heads. They reside principally on both sides of the Volga, and are in the governments of Tobolsk, Viætka, Nishnè-novgorod, Kazan, Simbirsk, and Ufa. Their language at present borders more upon the tartarian than on that of the Finns; and therefore some historical inquirers will not even allow them to belong to that stock: nevertheless they have in their manners and customs a great similarity with the generality of the Finns, particularly with the two last-mentioned nations, the Votiaks and Tscheremisses. These three tribes dwell together in villages, but never in towns; they are inured

to agriculture, and have abandoned the nomadic way of life: they are fond of horseflesh, are mostly heathens, have inchanters among them, and a sort of place for divine worship, which they denote by the generic term Keremet. At their meetings they sacrifice a horse, in which their principal religious solemnity consists.

11. The MORDVINES are by the Russians called Mordva, and dwell on the Oka and Volga, in the governments of Kazan, Nishnè-novgorod, Ufa, Simbirsk, and Pensa. Though not so numerous as the Tschheremisses and Tschuvasches, they are yet a very considerable nation, which has been found to increase on every successive enumeration, and divide themselves into two main stems, Mokschan and Ersan; by which they are peculiarly named, though the general appellative of Mordva is not unusual even among themselves. This nation, in the opinion of several russian antiquarians, is the same which Nestor mentions under the names of Meres or Merænes, on occasion of the national confederacy entered into by the five flavonian and finnish tribes on the lake Ilmen for the founding of the russian state, and who at that time inhabited the districts of Rostof, Halitsch, Kostroma, and Yaroslaf*.

* See the article Russians, and the note, p. 313.

12. The last nation of the Finns that remains for us to mention are the OSTIAKS OF THE OBY. — On the conquest of Siberia by the Tartars, they contemptuously called all the inhabitants of this extensive country, of which, however, they knew but a small part, Uſchtyæk, a word denoting a foreigner or barbarian. This denomination was at first retained by the Russians from ignorance, and has since been lost in proportion as the diversity of the Siberian nations have been detected. However there remain at present three very distinct people both in descent and language, the Ostiaks of the Oby, of the Narym, and of the Yenissey. Only the first of these three tribes belong to the stock of Finns. — The Ostiaks of the southern Oby call themselves Asyaks of the river Oby, which in their language is called Yak; the northern, Khondi Khui, people of Konda, because they withdrew from that river towards the north. Both stems dwell at present about the Oby and the Irtysh, in the government of Tobolsk, and derive their origin from the Permians*, from whom they probably separated to avoid bishop Stephen's barbarous zeal for making converts. If this derivation were as certain as it is pro-

* Their language comes nearest to the permian, and next to that to the vogule.

bable, from the similitude of the languages, they must surely have had some weighty motive for quitting their mild and gentle sky on the west side of the Ural for the inclement regions of the Oby. — The Ostiaks of the Oby are held to be one of the most numerous of the Siberian nations, but accurate statements of their population are not known.

From the generality of these nations of Finns, but especially from the Tscheremisses, the Tschuvasches, and the Votiaks, a mongrel horde has arisen, which has been increased by Tatars, and at present may be regarded as a peculiar tribe. The Russians have given them the name of ТЕПТЕРИ, a word originally tartarian, and denoting a man who cannot pay his taxes. The Tepteri were formed in the middle of the sixteenth century, during the dissolution of the kasan-tartarian empire, and established themselves at first in that part of the Ural-mountains which belongs to the government of Ufa. At present they are so much intermingled that their origin is scarcely discernible. They are found to be more numerous at every succeeding census; in the year 1762 about 34,000 of them paid the imposts.

BEFORE we take our final leave of the Finns, we shall here subjoin a few particulars relating to the conversions in Livonia, from the chronicle of Henry the Lette.

Most of the conversions from heathenism in the fourth and fifth centuries were undertaken by fanaticism and the lust of dominion; were carried on under a total ignorance of the human heart, by means of imposture, pious frauds, artifice, and violence, supported in their course by superstition, intolerance, and self-interest, and finally terminated in a tyrannical subjugation of the understanding and will, and in the usurpation of the property of the individual. With this resemblance on the whole, the several nations and ages in which they were transacted have had their variations. Sometimes persuasion was more employed, sometimes deceit succeeded better, and sometimes tortures and murders were found most beneficial. The history of Livonia unites all these methods in one striking picture. Scarcely any means were left unemployed. A diversity which will be very comprehensible when we see what a difference there was in the converters in regard to rank, talents, authority, views, and abilities; and at the same time take into contemplation the qualities of the heathens who were to be converted.

The

The first dawn of christianity in Livonia promised a lighter, warmer, and more productive day than that which actually ensued. About twenty years had elapsed since the merchants of lower Saxony had discovered the mouth of the Dvina, and employed it in the purposes of commerce, when their factory became so numerous as to require a religious teacher. This teacher was Meinhard, an old monk of the monastery of Segeberg in Holstein. The time of his arrival in the country is not ascertained. Some pretend that it was in 1170, others in 1186. Probably his coming was chiefly on account of the heathens; but, not prematurely to betray his design, he confined himself at first to his little german congregation. During this time he was learning the language of the country; and, thinking himself sufficiently strong in it, he requested permission of the russian prince Vladimir at Pscove, to preach christianity to them. Whereby we see that the worthy old man connected caution with his zeal, two properties not always found together; pity that his perceptions in religion were only the perceptions of the age in which he lived: extremely weak, undigested, and confined. It is therefore to be lamented, but not to be wondered at, that he, as was customary at that time, baptized without instructing.

ing. A weak ill-founded edifice cannot possibly stand long. Nevertheless, Meinhard's labours were attended with success. A service which he rendered to his new countrymen in a civil capacity contributed not a little to it: he repulsed the Lithuanians who had made an incursion upon them. Profiting by this event, he laid before them the necessity of having a strong fortress; they were convinced by his arguments: and he promised it them on condition that they would allow themselves to be baptized. Meinhard caused builders and materials to be brought from Gothland; and for defraying the expence obtained an estate in land. The fortress Ykeskola, now called Uexkull, was finished; but when the natives had got what they wished, they would hear nothing farther of christianity. The greater part had promised to submit to baptism when the building should be completed; these flew from their word: many had been previously baptized, and even the majority of them relapsed. Their neighbours also in the present Kirchholm cheated the good priest. They too promised to become christians, if he would but build them a castle, and they likewise forfeited their word. The people of Kirchholm proceeded still farther: they plundered Meinhard of what he had, and maltreated his people.

That

That he was in the mean time appointed bishop was not a sufficient consolation to him. He therefore determined to return with his clergy to Germany. The Livonians more than once detained him from putting his design in execution; one while by entreaties, at another by menaces and actual violence, and yet they did all that lay in their power to render his stay uncomfortable. Deceived in his fairest hopes, exposed to a variety of insults, and surrounded by still greater perils, Meinhard passed a few uneasy years longer among them, and died more of grief than of age. A man worthy of a better fate.

Whether accident or artifice on one hand, and pious credulity on the other, had the greater share in producing them, it is not now to be ascertained, but the Livonians also have MIRACLES to shew in the history of their conversion. The monk Diederik of Thoreyda was one of Meinhard's most active assistants. He baptized beyond the Aa. From envy at the fertility of his fields, the Esthonians wanted to sacrifice him. In order that they might learn the will of their deities on the subject, they began their usual experiment with a sacred horse, by remarking which foot he set foremost on beginning to walk; on this occasion he moved the left

left foot first, it was therefore the will of the gods that Diederik should not be sacrificed. But the Esthonian priests were of opinion that the God of the christians seated himself on the back of the horse, and forced him to set that foot foremost. The horse must therefore be rubbed down in order to brush off the deity to the ground; and the solemnity was renewed. Again the left foot! Diederik was now absolved. — A Livonian who had a wound besought the monk to heal him, on condition of being baptized. Without knowing any thing of the art of medicine, the converter mingled some herbs together, to which he hoped to impart a healing efficacy by his prayers; the patient in fact recovered, and became a christian. — Another, at the point of death, thought by baptism alone to be restored to health. His family and friends conceived that price too high, and nothing but the most manifest peril of death at last made their obstinacy yield. However, the proselyte died. So much the worse! we are ready to exclaim. But no: so much the better! Another new convert, who was 42 miles from the place, saw the soul of the deceased borne by angels to heaven: a circumstance which had a better effect upon them who believed it than the recovery of a patient.

It

It was this Diederik whom bishop Meinhard sent to Germany to preserve the remains of christianity by all possible means against the heathen, were it even by force of arms. Their ill-treatment of the pious bishop had compelled him to this measure. Thus, by insincerity, artifice, and thirst of blood, they drew the sword from the scabbard which afterwards chastised them in so dreadful a manner.

In Meinhard's place, Berthold, abbot of the monastery of Lockum in Hanover, was elected bishop. He had Meinhard's caution without his zeal; it was, therefore, no wonder, that in the present state of things he hesitated to go into Livonia. But the archbishop of Bremen, to whom the new congregation had applied, persuaded him to take the journey. Accordingly, he arrived in the year 1197, and strove to recommend himself to the natives by qualities which they valued most. He gave them frequent entertainments, and on all such occasions sent them home with presents. He therefore met with a civil reception. But only for a short time. Affronts were very soon followed by outrages. He was reproached with having come merely on account of his poverty. Perhaps he was too precipitate in demanding the interest on this out-lying capital of the entertainments.

Matters,

Matters proceeded so far, that at the consecration of the church-yard of Kirchholm, the Livonians threatened to stab, or drown, or burn him. Perhaps it was owing solely to this indecision on the mode of his death that he happily escaped. He found it however not advisable to remain here any longer. He left Livonia; and we should have pitied him if he had been obliged to this step for the sake of being at rest; but he did it out of malice. He applied to Gothland and to Lower Saxony for succour. The pope afforded him the most effectual by causing a crusade to be preached against the heathens in Livonia. In consequence whereof a great number of sinners, desirous of meriting indulgences by murders, flocked to his standard, and Berthold, in 1198, returned to Livonia with soldiers. According to the unhappy notions that prevailed at that time, the field of religion, which can only be fertilized by cordial zeal and diligence in instruction, was to be fattened with blood. From such methods nought but thorns and thistles can grow. The sight of an armed host did not produce among the heathens and heretics what was probably expected. Prepared to fight, they went to meet the invaders. They sent deputies to the bishop with the question, why he was

come with soldiers? Berthold answered, to punish them for their shameful lapse from the christianity which they had adopted. The natives replied, let him send away his warriors, and exercise his office in peace; those who have suffered themselves to be baptized, may by his remonstrances be preserved in christianity; the rest he may convert by words, not by blows. A reply which ought to have put the christians to shame; but it cannot be mentioned to the honour of the Livonians. This was only a new essay of their artful insincerity, in their eagerness to get the soldiers away, as appeared in the sequel. A truce was concluded, but the heathens soon broke it by the assassination of several Germans. Berthold declared war, and a bloody battle ensued. The first who had attempted to make christians in Livonia by the sword, was the first who fell by the sword; the bishop on horseback rushed into the throng, was stabbed, and cut to pieces. The enemy, however, had been previously thrown into disorder, and were now more furiously pursued by the enraged soldiers. And thus the very loss of the chief contributed to the great increase of the congregation. The heathens being entirely routed, and even their corn-fields laid waste by the christians, now sued for

for peace, admitted priests into the forts, promised them from each haak * a measure of wheat, and flocked in such numbers to be baptized, that in two days in Uexkull and Kirchholm 150 christians — were *named*. This done, the German soldiers to a man were embarked on board the merchant ships, and returned home. Scarcely were the ships at sea, but the Livonians ran and bathed in the Dvina; in order, as they said, to wash away the baptism and christianity together, and send it back to Saxony. They found a human head cut out in a tree. In the opinion that this was the god of the Saxons, who might probably still do them much mischief, they hewed it in pieces, made a particular kind of float of the fragments, and set it swimming on the sea towards Gothland. They also robbed and plundered all that remained behind, and put upwards

* Haaks, hakes, or hacks, (for it is written these several ways,) is the land-measure for ascertaining the dimensions of an estate and its taxes to the crown. An estate of two haaks may be more productive than another of five. In Esthonia the labouring people upon the estate, but in Livonia the cultivated ground and its product, determine the number of haaks. Grounds that were formerly tilled and used, as such were enregistered at the revision, but for want of people now lie unlaboured, are called waste haaks, from which no taxes are demanded. In regard to such it is said, the estates can never increase its number of haaks.

of 200 to death. It is easy to imagine that the clergy, of whom several had come hither at various times, must be thrown into great distress; but the dangers of their situation were increased when the Livonians expressly resolved, that all priests who should be found in the country after Easter 1199, should be slain. A similar fate awaited the merchants. These ransomed their lives with money; but the clergy were forced to fly to Lower Saxony. Christianity in Livonia now seemed to be verging to its total overthrow, and just at this point of time appeared the man who established it on a firm foundation; indeed on swords, fortifications, and chains of bondage — he, however, established it. There came the armed apostle Albrecht of Apelderren, afterwards canon of Bremen, now bishop of Livonia: and it must be confessed that the livonian heathens deserved such a one much more than many other nations who were harassed into christians.

The monk Meinhard, and the abbot Berthold, were principally bent upon baptism. Albrecht the nobleman and the canon was more resolved upon governing than converting the Livonians. As soon as he was elected bishop, he made it his business to procure effectual support in Gothland, Denmark, and Germany, and obtained it so richly, that in autumn 1199, he arrived in
Livonia

Livonia with 23 ships. At first he was not successful ; but now the burning of the corn-fields had again its effect : that is, the Livonians became christians for fear of starving. They confirmed their fidelity by hostages, which were obtained by inviting the chieftains to a feast, and then seizing and conveying them to prison. The pope had hitherto been very active in the propagation of christianity in Livonia, by a general summons to make war upon the heathen ; he now made a merit of adding good counsel. He issued a bull, in which he recommended the converters to use gentleness and lenity towards the baptized, even at the expence of the true discipline of the church. And indeed the conduct of the clergy in Livonia at that time redounds infinitely more to their honour than elsewhere. It was, properly speaking, the temporal arm that riveted the fetters of slavery on the natives, and, in the sequel, made even the clergy feel the weight of its iron hand. True, it was the clergy themselves that armed it, when the bishop, in the year 1201 or 1202, founded the order of the teutonic-knights, and procured its confirmation by the pope. Their destination was to support the bishop in converting the infidels ; their constitution was one and the same with that of the knights-templars. For the times, principles, and exigencies of Albrecht,

the institution of such an order was no bad conceit. Indeed he made an annual journey to Germany to fetch pilgrims; but when these had been robbing and plundering for a year to the glory of God, they were absolved from their vow, and went back to Germany. Whereas Albrecht employed valiant men from whom the bishopric might expect continual protection. For which reason he gave ample fiefs to some courageous nobles. But having not many of these at his disposal, he fell upon the thought of forming about him a sort of standing army; and this purpose he effected by the new order. He also devised other methods for farther confirming christianity in the country, in temporals as well as in spirituals. In the year 1201 the bishop built the city of Riga, the consequences whereof the heathen plainly saw, but they endeavoured in vain to prevent it. Hitherto the cathedral chapter was at Uexkull; Albrecht now transferred it to his new city, where he also built a monastery. Another monastery was also constructed at the mouth of the Dvina. The clergy dispersed themselves in all the country round, in order to teach and to baptize,

Of the methods employed in teaching, history mentions only one. It is curious enough, but certainly not the worst of those times. The
dramatical

dramatical annals of any nation can scarcely shew a theatrical college of such remote antiquity as that of Riga. At Riga in 1204 was acted a prophetic-play, that is, a dramatized extract from the history of the old and new testaments. The design was by this means to allure the heathen to the adoption of christianity, partly by attaching the converts to their new religion by sensible gratification, and partly to instruct them in the history of it. The Livonians, baptized and unbaptized, resorted to it in multitudes, and they were informed of the contents by an interpreter. The piece was probably in latin; in pretty much the same taste as the biblical plays that were customary in England, France, and Germany, in the sixteenth and even the seventeenth century. The number of the performers must have been very great, (perhaps it consisted of the whole order together with the chapter,) as battles and wars were represented, for instance from the history of Gideon, David, and Herod. The first exhibition, however, was like to have been attended by very serious consequences. When the Israelites under Gideon's command were fighting at close quarters with the Midianites, the heathens took it into their heads that the armed troops were brought in under this pretence, in order to fall upon them. They, therefore, sought their

safety in flight. Their mistake, however, being explained to them, they were persuaded to return, and the play was brought to a happy conclusion.

It is not the historian's fault if the several groups of this picture stand rather wide asunder. The last scene was a biblical comedy. Now follow martyrs.

Our annalist * is as lavish of this venerable name as the fathers of the church, and therefore is not always careful to bestow it according to merit. A couple of inconsiderate proselytes ventured, notwithstanding the remonstrances of the german commanders, to go into the meeting of their heathenish brethren in order to hear their consultations; they were laid hold on and methods adopted to force them to abjure christianity: they remained firm, and the consequence was that they were killed. The annalist calls them martyrs. If, in the incessant conflicts with the neighbouring heathens, some of the baptized were taken prisoners, and, for the cruelties they had used, were cruelly put to death, they are styled martyrs. If pilgrims, who came to Livonia for the purposes of robbery and murder, met their deaths in a combat with the heathens,

* Henry the Lette, Livonian Chronicle, published by Arndt, part i.

they are denominated martyrs. There were, however, really some who deserved that appellation. Some priests who lived among the new-converts were clandestinely attacked and murdered without accusation. But with people who themselves are hardened to the highest degree against all sorts of torture, the sight of intrepid sufferers made no great impression. The business of conversion, therefore, in Livonia was not so much benefited by martyrs as it was in luxurious Asia, and Italy under the heathen emperors.

In the year 1205 Andrew archbishop of Lunden, on his return from an unsuccessful crusade to the isle of C  sel, came to Riga, where he passed the winter. Henry the Lette relates many good deeds which he performed; we may reasonably believe that also many of the events that afterwards happened, without being ascribed to his merit, were of his doing. Andrew, by having prosecuted his studies in Italy, France, and England, was a very learned divine, and now made in Riga an excellent use of the knowledge he had acquired. He gave lectures in theology to the clergy of that city, expounded the psalter, and exercised them in ascetic practices. By his advice the vicar of the bishop of Riga, in return for hostages received, sent priests
among

among the Livonians, divided the country into distinct parishes, and caused them to be not merely baptized, but previously instructed. To secure his institutions churches were built. Among the popular teachers a certain Alobrand particularly distinguished himself by zeal, activity, and prudence. The confidence placed in him by his congregation was so great that they appointed him their judge even in temporal matters. If the connection of the civil authority with the priesthood be in general an impediment to the progress of mental improvement, it is certainly beneficial among a rude people. Had all priests been like Alobrand they would not so soon have forced the laity to take the seat of judgment. But by the oppressions of rapacious adventurers this practice very quickly degenerated into an obstacle to conversions.

Notwithstanding this better regulation, contrary means and accidental circumstances made more christians than instruction. The Germans fitted out an expedition against Selburg beyond the Dvina. The fortress was surrounded, the besieged were harassed on all sides by the attacks of the enemy; at length the christians set fire to the town. On this the Selens from desperation capitulated with the christians. One of the missionaries came to the Lettgallians in

the district of the present Valk. The historian honestly relates that they had adopted christianity, because they reckoned on the protection of the Germans against the oppressions of their neighbours. But at the same time the russian converter had appeared in the district. Doubtful to which party of religion they should give their assent, the former pitched upon a method which was still more ambiguous than their motive. The lot was to decide. It fell in favour of the Germans; and thus the congregation of Riga acquired a new increase of converts. In another instance the matter stopped short at the intention; but, as an addition to the history of rude uncultivated man, it ought not to be passed over. The Esthonians were besieging a town which was defended by converted Lettes. While the enemy were carrying on the attack, and the garrison were endeavouring to repulse them, the priest of the citadel had the courage to get up on one of the highest ramparts, and with a musical instrument to accompany a religious hymn. The heathens were so surprised at a melody which they had never heard before, that they suddenly refrained from the attack, and inquired the occasion of it. The Lettes returned for answer that it was the expression of joy at the happiness arising from baptism, and on account of
the

the visible assistance of God in the combat. (They had actually gained some advantage.) Hereupon the Esthonians made offers of an accommodation. But, as the restitution of merchandize that had been carried off to a great amount was made an absolute condition of the treaty, the consideration of so great a surrender effaced the transient impression of that occurrence, and they contented themselves with raising the siege. In short the business of conversion among the Lettes went on so prosperously, that they were all baptized to the number of 1209.

Far more slow was the progress of christianity in Esthonia. Before the appearance of Meinhard a certain Fulco had received the commission to labour at the conversion of the Finns and Esthonians. He was succeeded by another likewise appointed by the Swedes; still, however, little was done. Perhaps it was because conversion was the sole concern; and that, with so robust and stubborn a people, could not possibly proceed so rapidly as among the more pliant Lettes. Albert adopted a different method; he resolved first to conquer Esthonia and then to make converts. He went so zealously to work, that in 1210 he ordained a bishop even before he had a diocese to give him.

Christ,

Christianity, however, was gaining ground, but not a foot in breadth that was not manured with blood; frequently so thick that even the furious zealots themselves, though hardened by the practice of the times, stood aghast at the sight, and seemed to relent. Thus, in the year 1210 the burg of Viliende (Fellin) was brought to submission by compromise. The fortress was full of dead bodies, and the remainder of the garrison disabled by wounds. The first thing the conquerors did was only to sprinkle them all with holy water, and then proceeded to instruct the heathen in the first rudiments of christianity. At other times they used first to baptize; for this once, however, they deferred it a little, because, says the annalist, too much blood had been shed. Leal was converted by fire. The outworks had been previously burnt by the Germans; the besieged endeavoured to move the enemy to retire by an offer of money: but this they rejected, at the same time assuring them, that they wished for nothing more than that they would allow themselves to be baptized, that they might be reconciled with the great Pacificator, and become their brethren as well in the present as in the future world. The Esthoni-ans still held out; but the fire was spreading far and wide; and, in order not to be
burned,

burned, they requested to be baptized. Was it surprising, that such proselytes adhered to the faith no longer than till the apostolic incendiary had quitted their borders?

But I am weary of pursuing my subject, and if any one should censure me for it I envy him not his feelings. — Therefore only a few traits more, as being eminently characteristic.

Ungannia (the district of Dorpat) and Sacala (the country round Fellin) were in 1214 brought to christianity. Rotalia (the Strand-vyck) was likewise to be compelled to adopt it, and the Germans were besieging a strong castle in that district. After a brave resistance the Esthonians were forced to surrender for want of provisions and water. This they did on the usual terms of submitting to baptism. Twenty days afterwards a priest was sent to them. Concerning any previous instruction we find nothing recorded. He merely asked, Will ye renounce idolatry and believe in the only God of the christians? They answered, Yes. On which he poured water on them, saying the words: Ye are therefore baptized in the name of the father, the son, and the holy-ghost. With this the whole of the grand business ended.

Better regulations however were soon adopted in behalf of the Esthonians. The bishop of Riga
in

in the year 1219 sent priests into many of the provinces, who at least took some pains in instructing before they administered baptism; it is nevertheless plain from the precipitancy with which these converters proceeded in their labours, that the instruction could not possibly be adequate and sufficient.

Henceforward christianity made rapid progress in Esthonia. Alas, it did! and never was it more clearly manifest with what spirit the converters were animated than at this period. Christianity furnished merely the pretext, all their industry and abilities were directed by the thirst of dominion. The Swedes made themselves masters of a part of Strandvyck, and to retain them as subjects made them christians. But in an attack made by the Oesclers their whole army was cut off, and for the present they abandoned the enterprise. The Danes, who were in possession of the province of Reval, disputed the right of the people of Riga to baptize in Esthonia, pretending that they alone had the right of dominion there; the two rights being at that time the same. This species of rivalry was unworthy of christianity; but still more were the shocking scenes which it occasioned. The Danes sent into the heathen villages, whither their baptists could not immediately come,

come, large wooden crosses : the erection whereof was for the purpose of informing the people of Riga that these places were already in occupancy. They proceeded still farther. The Riga priests came once into an esthonian village, to whom the elderman said, Here all are already baptized. Probably the priests knew that the Danes could not yet have been here, and therefore asked, How? and by whom? " Yes, answered the " Esthonian, some of our people were in a " village, where the danish priest happened to " be; there he baptized us, and gave us conse- " crated water to take home, that we might " here baptize ourselves. Accordingly we " have sprinkled our wives and children with it, " and what need is there then of a new bap- " tism?" Certainly, what need of a new one? but in the circumstances which the new converts exhibited, why even the first? The manner of proceeding was in this instance only absurd; the Danes in other places carried it to a criminal act. It may be presumed that the reader will be glad to know how. The Danes hanged an elderman of Vierland for having caused himself to be baptized by the men of Riga, and given them his son as a hostage. An accommodation, indeed, was entered into between the Germans and the Danes, whereby the latter renounced the
paramount

paramount lordship over Esthonia which had been conquered by the knights : yet tranquillity was of no longer duration, than while one party or the other felt itself too weak for beginning the attack. When they had once found a fit opportunity their reciprocal feuds were recommenced. A papal legate who came to Riga in 1225, and gained great reputation by his manner of treating the new converts, took all possible pains to reconcile the contending parties : but always without any lasting effect. On the contrary, his presence was the innocent occasion of fresh acts of baseness in the Danes. For as soon as he was gone, they set up an impostor as legate from the pope, who formally put the knights under a bann, and employed the zeal of the new converts in behalf of the church, to incite them to exterminate their converters. These contentions lasted till towards the middle of the thirteenth century. Livonia and Esthonia were baptized, even Œsel, by the campaign of 1227, was brought under the yoke of the christians, and at the middle of that century there were only in Courland a few nominal heathens ; in reality indeed there were infinitely more. Five bishoprics were at that time in the new-converted provinces ; Riga, Dorpat, Œsel, Selburg, and Reval.

Considering the whole of this business of conversion, are we to be surprised at the frequent relapses of those who had been baptized? And is it any wonder that a building constructed on so weak a foundation should, even after so many centuries are elapsed, discover no traces of its origin? That these provinces were in the sequel almost uninterruptedly ravaged by bloody wars, domestic and foreign, that the natives in various parts still sigh under an oppression, of which it is thought a sufficient justification to say that it is not equal to the negro slavery; that many a man is made a teacher of a congregation, who scarcely understands the first elements of the language of his people: — all this, and much more contribute greatly to the deplorable appearance, of which of late some honest and enlightened preachers of these provinces have publicly complained: but it is no less certain that it is greatly owing to the methods taken for converting our heathen at the beginning of the nineteenth century, that still at the close of the eighteenth so many remains of paganism are found among the Lettes and Esthonians*.

Of

* Das Russische reich, oder merkwürdigkeiten aus der geschichte, geographie und naturkunde aller der länder, die jetzt zur russischen monarchie gehören, von Karl Gottlob Sonntag, oberpastor an der Jacob's kirche zu Riga, tom. i.

Of the Finlanders, Esthonians, or *Æstiers*, together with all the flavonian tribes, in those times known only by the appellation of Sauro-mates, or northern Medes, of which nation they either were or pretended to be the descendants, as also of the Goths, the Romans scarcely knew any thing but the names. Norway (*Nerigon*), Sconen (*Scandia*), *Dunney*, and *Varæ* were, according to them, islands lying near the Frozen-ocean, as well as Thule, whither they used to sail from Norway, as well as from the northernmost point of Scotland. These obscure notions of the Romans respecting the geography of the northern nations are consequently also very incoherent, and of no manner of use. — expresses himself thus : Sunt qui et ali-
prodant, Scandiam, Dunney,
mamque, ~~or~~ *Nerigon*,
navigent. A Thule

p. 76, & sqq. v
to quote th
most c

mate concretum, a nonnullis Cronium appellatum. Lib. iv. cap. 16. It is evident, says Mr. Reinhold Forster, that the whole coast is meant here; and though the learned Schlcetzer, whose information on these points is universally respected, in his "Introduction to the universal history of the north," an excellent work, chooses to understand by Bergos one of the two sons of Hercules mentioned by Pomponius Mela, viz. Albion and Bergion, who gave the names of Albion and Bergion (or ΟΥΕΡΥΑ, Juverna, Hibernia) to the british islands; yet I cannot persuade myself to take it in this light, as it seems more probable to me that the appellations of Dumna Bergos belonged to the islands Dumnæ or near Halgoland, and Vœrœ near the continued series in which these used seems to render this superfluous. For the same of looking for Thule

